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CITY OF ROCKVILLE, MD DEPARTMENT OF PUBLIC WORKS POTOMAC VALLEY ROAD SIDEWALK

CITY OF ROCKVILLE GENERAL NOTES: (NOV 2016)

- 1. THE APPLICANT IS THE ENTITY FOR WHICH THE CITY OF ROCKVILLE DEPARTMENT OF PUBLIC WORKS (DPW) HAS ISSUED A PERMIT. FOR DPW PROJECTS WHERE A PERMIT IS NOT APPLICABLE, THE ENTITY FOR WHICH THE CITY CONTRACT IS ISSUED SHALL BE CONSIDERED THE APPLICANT IN THESE NOTES. THE APPLICANT IS RESPONSIBLE FOR ALL CONTRACTORS, AGENTS, SUBCONTRACTORS, OR OTHER ENTITIES COMPLETING WORK UNDER THIS PERMIT AND/OR APPROVED PLAN.
- 2. THE APPLICANT MUST ARRANGE A PRE-CONSTRUCTION MEETING PRIOR TO COMMENCING ANY WORK. PROVIDE AT LEAST 48 HOURS OF NOTICE TO THE FOLLOWING: CITY PROJECT INSPECTOR LISTED IN THE PERMIT, CITY FORESTRY INSPECTOR AT 240-314-8713, IF REQUIRED BY EITHER A DPW AND/OR FORESTRY PERMIT, OR DPW SEDIMENT CONTROL INSPECTOR AT 240-314-8879, IF REQUIRED BY PERMIT.
- 3. THE APPLICANT MUST CONTACT MISS UTILITY AT 1-800-257-7777 OR #811 OR MISSUTILITY.NET SO THAT UTILITIES ARE MARKED PRIOR TO HOLDING ANY PRE-CONSTRUCTION MEETING.
- INFORMATION CONCERNING EXISTING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS. THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF EXISTING UTILITIES BY DIGGING TEST PITS AT THE UTILITY CROSSING WELL IN ADVANCE OF TRENCHING. IF CLEARANCE IS LESS THAN SHOWN ON THIS PLAN, CONTACT THE PROFESSIONAL ENGINEER WHO STAMPED THE DESIGN PLANS BEFORE PROCEEDING WITH CONSTRUCTION.
- 5. MAINTAIN A MINIMUM ONE-FOOT VERTICAL CLEARANCE BETWEEN ALL CITY UTILITIES CROSSING ANY OTHER UTILITY, UNLESS OTHERWISE NOTED. MAINTAIN A FIVE-FOOT HORIZONTAL CLEARANCE WITH BETWEEN A CITY UTILITY WITH ANY OTHER UTILITY OR STRUCTURE. THE ONLY EXCEPTION IS THAT THERE SHALL BE A TEN-FOOT HORIZONTAL CLEARANCE BETWEEN CITY WATER AND SEWER MAINS.
- 6. AT THE END OF EACH DAY, ALL TRENCHES SHALL BE BACKFILLED, ALL EQUIPMENT SECURED AND THE AREA LEFT IN A SAFE CONDITION. STEEL PLATES ARE ALLOWED TO REMAIN NO LONGER THAN SEVEN DAYS. PLATES ARE TO BE NOTCHED (RECESSED) AND PINNED TO THE ROADWAY. PLATES MUST BE LARGE ENOUGH TO ALLOW A MINIMUM OF ONE-FOOT BEARING ON ALL FOUR SIDES OF THE PAVEMENT SURROUNDING THE EXCAVATION. THE STEEL PLATE REQUIREMENTS ONLY APPLY TO PUBLIC STREETS.
- 7. THE PUBLIC ROAD UTILITY PATCH SHALL BE IN ACCORDANCE WITH CITY STANDARD DETAIL #60, CONTAINED HEREIN, OR AS SHOWN ON THE PLANS. ALL TRENCHES IN PUBLIC STREETS SHALL BE FILLED WITH COMPACTED GRADED AGGREGATE BASE (GAB) FROM BELOW THE PAVEMENT TO THE TOP OF THE PIPE EMBEDMENT ZONE OR TO A DEPTH OF FIVE-FEET, WHICHEVER IS LESS.
- 8. DPW NORMAL WORKING HOURS ARE MONDAY THROUGH FRIDAY, EXCEPT HOLIDAYS, FROM 7 A.M. TO 5 P.M. THE CITY OBSERVES THE FOLLOWING HOLIDAYS: NEW YEAR'S DAY, MARTIN LUTHER KING'S BIRTHDAY, PRESIDENT'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, VETERANS' DAY, THANKSGIVING DAY, THANKSGIVING FRIDAY AND CHRISTMAS DAY, AND ALL DAYS OF GENERAL AND CONGRESSIONAL ELECTIONS THROUGHOUT THE STATE. THE CONTRACTOR WILL NOT BE PERMITTED TO CLOSE LANES OR DO ANY WORK THAT REQUIRES THE SERVICES OF THE CITY FORCES, OUTSIDE OF THE NORMAL WORKING HOURS, UNLESS OR AUTHORIZED BY DPW IN WRITING. THE CONTRACTOR, WITH WRITTEN PERMISSION OF DPW MAY BE PERMITTED TO WORK OUTSIDE OF THE NORMAL WORK HOURS FOR CLEAN-UP ACTIVITIES OR OTHER SUCH ITEMS THAT DO NOT ADVERSELY IMPACT TRAFFIC, RESIDENTS OR CITY SERVICE.

- 9. TRAFFIC MUST BE MAINTAINED ON ALL ROADWAYS WITHIN THE CONSTRUCTION AREA AS DIRECTED BY DPW. NO LANE CLOSURE SHALL BE PERMITTED BETWEEN 7:00-9:00 A.M. OR 3:30-6:00 P.M. MONDAY THROUGH FRIDAY. AN EXCEPTION IS THAT LANE CLOSURES ARE PERMITTED ON SECONDARY RESIDENTIAL STREETS AT ANY TIME DURING NORMAL WORKING HOURS. DEPLOYMENT AND DESIGN OF ALL TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVISES (MUTCD). IF REQUIRED, TRAFFIC CONTROL PLANS SHALL BE REVIEWED AND APPROVED BY THE CHIEF OF THE TRAFFIC AND TRANSPORTATION DIVISION. DPW MAY SUSPEND LANE CLOSURE OR OTHER TRAFFIC CONTROLS AT ANY TIME DURING, OR IN ADVANCE OF, INCLEMENT WEATHER EVENTS.
- 10. SHEETING AND SHORING IS THE TOTAL RESPONSIBILITY OF THE APPLICANT. A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MARYLAND SHALL SEAL THESE DRAWINGS. PROVIDE THREE COPIES TO DPW FOR INFORMATIONAL PURPOSES ONLY.
- 11. IN ADDITION TO ALL CITY PERMITS, THE APPLICANT IS RESPONSIBLE TO ENSURE THAT ALL NECESSARY FEDERAL, STATE AND/OR MONTGOMERY COUNTY APPROVALS AND/OR PERMITS HAVE BEEN OBTAINED IN ASSOCIATION WITH THIS APPROVED PLAN.
- 12. SHOP DRAWINGS MUST BE PREPARED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MARYLAND PRIOR TO FABRICATION. THE PROFESSIONAL ENGINEER WHO SEALED THE DESIGN PLANS (BUT NOT THE SHOP DRAWINGS) MUST APPROVE THE SHOP DRAWINGS FOR CONFORMANCE TO CONSTRUCTION. ALL PIPES AND STRUCTURES IN PAVED AREAS SHALL BE DESIGNED FOR HS-20 VEHICLES LOADING.
- 13. UPON COMPLETION OF CONSTRUCTION, THE APPLICANT SHALL PROVIDE THREE SETS OF RED LINED AS-BUILT PRINTS (24"X36") FOR REVIEW AND APPROVAL BY THE CITY. THE DRAWINGS MUST CONTAIN THE ORIGINAL APPROVAL SIGNATURES AND PROFESSIONAL ENGINEER'S SEAL AND SIGNATURE (A SCANNED IMAGE OF THE ORIGINAL MYLAR IS ACCEPTABLE). THE AS-BUILT SHALL BE SEALED BY A PROFESSIONAL SURVEYOR, AS APPROPRIATE AND MUST BE LICENSED BY THE STATE OF MARYLAND. THE SEAL SHALL NOTE THAT IT IS ONLY FOR THE AS-BUILT AND SHALL INCLUDE AN AS-BUILT CERTIFICATION TO THE CITY. UPON RECEIPT OF WRITTEN APPROVAL, THE APPLICANT SHALL PROVIDE APPROVED AS-BUILT MYLAR DRAWING ALONG WITH THE ORIGINAL MYLARS (WITH ALL ORIGINAL SIGNATURES) TO CITY PRIOR TO THE RELEASE OF THE PERMIT.
- 14. THE APPLICANT MUST COMPLY WITH THE MONTGOMERY COUNTY NOISE CONTROL ORDINANCE. PLEASE REFER TO THE MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION AT 240-777-7770, ASKDEP@MONTGOMERYCOUNTYMD.GOV, OR WWW.MONTGOMERYCOUNTYMD.GOV/DEP.

OWNER/DEVELOPER CERTIFICATION

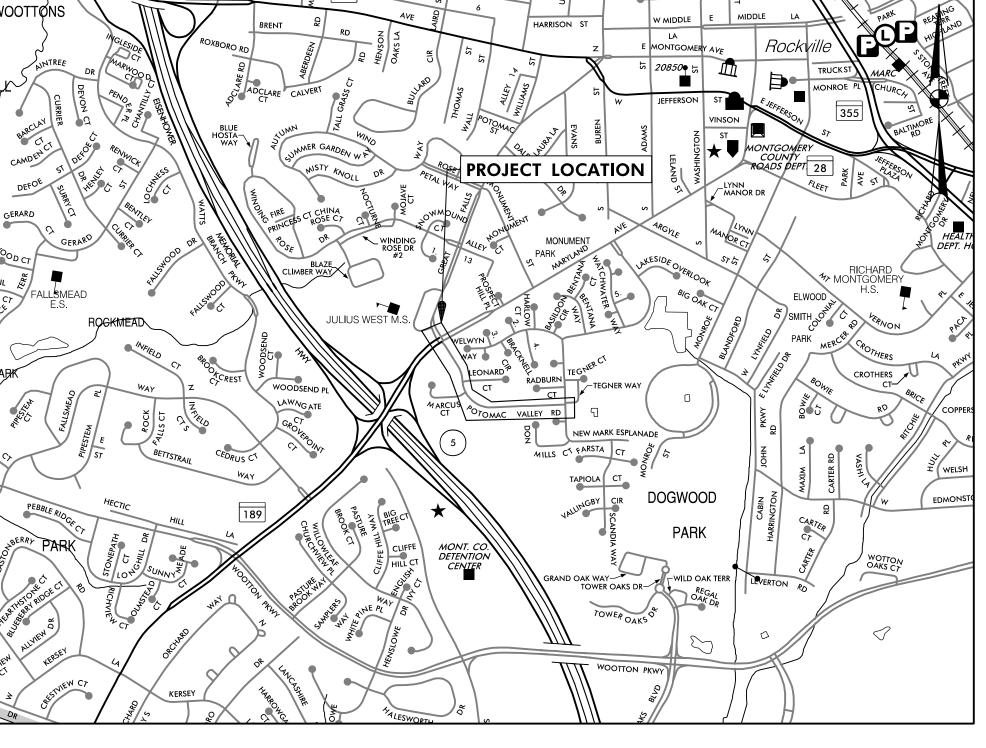
I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT, OR ALL OF THESE, WILL BE DONE PURSUANT TO THIS PLAN AND THAT RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATION OF TRAINING AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING OF THE PROJECT AND THAT APPLICABLE SEDIMENT CONTROL CONDITIONS AND REQUIREMENTS OF THE CITY OF ROCKVILLE AND THE STATE OF MARYLAND AND ITS AGENCIES ARE HEREBY MADE PART OF THIS PLAN.

SIGNATURE:		
PRINTED NAME AND	TITLE:	
DATF:		

DESIGN AND QUANTITIES CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE LATEST MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND THE ORDINANCE OF THE ROCKVILLE CITY CODE. THE ESTIMATE TOTAL AMOUNT OF EXCAVATION AND FILL HAS BEEN COMPUTED TO BE 405 CUBIC YARDS OF EXCAVATION AND 86 CUBIC YARDS OF FILL AND THE TOTAL AREA TO BE DISTURBED AS SHOWN ON THESE PLANS HAS BEEN DETERMINED TO BE 36.448 SQUARE FEET OF WHICH 36.448 IS ON-SITE PROPOSED DISTURBANCE RIGHT-OF-WAY. THE IMPERVIOUS AREA SUBJECT TO STORMWATER MANAGEMENT SHOWN ON THIS PLAN IS 0.32 ACRES OF WHICH 0.32 IS ON-SITE IMPERVIOUS AREA WITHIN THE RIGHT-OF-WAY.

ANLA WITHIN	THE KIGHT OF WATE	
SIGNATURE: _		
	AND TITLE:	
DATE:		
	NSE NUMBER:	



VICINITY MAP

SCALE: 1"= 1000"

CONVENTIONAL SIGNS

		MAL SIONS	
PROPOSED MEDIAN BARRIER ELECTRICAL HAND BOX — SIGNALS	H.B. ■ ————	PROPOSED PIPE / CULVERT EXISTING PIPE / CULVERT EXISTING DROP INLET UTILITY POLE	
STATE, COUNTY OR CITY LINES	= = = :	WETLAND BUFFER	
RIGHT OF WAY LINEEXISTING ROADWAY		HEDGE / TREE LINE BUSH / TREE CONIFEROUS TREE	₩
BASE LINE OR SURVEY LINE FIRE HYDRANT HISTORIC BOUNDARY	\sim	GROUND ELEVATION	0.22

STANDARD SPECIFICATIONS BOOK, BOOK OF STANDARDS AND MUTCD

ALL WORK ON THIS PROJECT SHALL CONFORM TO THE MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION'S (SHA) SPECIFICATIONS ENTITLED: STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS DATED JULY 2020, REVISIONS THEREOF OR ADDITIONS THERETO; THE SPECIAL PROVISIONS INCLUDED IN THE INVITATION FOR BIDS BOOK; AND THE LATEST MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MD-MUTCD).

MAINTENANCE OF TRAFFIC NOTES

FOLLOW SHA WORK ZONE TEMPORARY TRAFFIC CONTROL STANDARDS AND SPECIAL PROVISIONS FOR MOT. MAINTAIN PEDESTRIAN ACCESSIBILITY AT ALL TIMES.

RIGHT OF WAY

RIGHT OF WAY LINES SHOWN ON THESE PLANS ARE FOR ASSISTANCE IN INTERPRETING THE PLANS AND ARE NOT OFFICIAL FOR FEE RIGHT OF WAY INFORMATION. SEE APPROPRIATE RIGHT OF WAY PLATS.

UTILITIES

THE LOCATION OF UTILITIES SHOWN ON THE PLANS ARE FOR INFORMATION AND GUIDANCE ONLY. NO GUARANTEE IS MADE OF THE ACCURACY OF SAID LOCATIONS. THE CONTRACTOR IS RESPONSIBLE TO LOCATE, DELINEATE, AND AVOID ALL EXISTING UTILITIES.

TOPOGRAPHIC SURVEY

THIS PROJECT IS ORIENTATED TO THE MARYLAND STATE PLANE COORDINATE SYSTEM NAD 83/91, AND NAVD 88. BASE TOPOGRAPHIC INFORMATION WITHIN THE PROJECT LIMIT WAS ESTABLISHED FROM FIELD SURVEY CONDUCTED IN APRIL 2020. GIS MAPPING SHOWN OUTSIDE THE PROJECT LIMIT OF DISTUBANCE WAS ESTABLISHED FROM AS-BUILTS PROVIDED BY THE CITY OF ROCKVILLE, AND AERIAL IMAGERY.

50% PRELIMINARY DESIGN

NOTES:

- 1. JOB SAFETY AND TRAFFIC CONTROL SHALL BE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
- 2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONFORM TO ALL LAWS AND REGULATIONS IN REGARD TO WORK UNDER OR ADJACENT TO OVERHEAD POWER LINES.
- 3. IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NATURALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO COMPLETE SUCH WORK.
- 4. THE CONTRACTOR SHALL NOTE THAT IN CASE OF A DISCREPANCY BETWEEN SCALED AND COMPUTED DIMENSIONS SHOWN ON THESE PLANS, THE COMPUTED DIMENSIONS SHALL GOVERN.

FILE

NOT TO

PROFESSIONAL CERTIFICATION:
I hereby certify that these documents
were prepared or approved by me, and
that I am a duly licensed Professional
Engineer under the laws of the State
of Maryland, License No. ______,
Expiration Date: ______

No. DESCRIPTION OF REVISION P.E. INITIAL DATE DPW DATE

APPROVAL OF REVISIONS AFTER INTIAL PLAN APPROVAL

Rockville

WALLACE MONTGOMERY

BEFORE BEGINNING CONSTRUCTION

CONTACT

"MISS UTILITY"

WWW.MISSUTILITY.NET

OR 1-800-257-7777

OR 811

AT LEAST 48 HOURS PRIOR TO EXCAVATION

dunt Valley, Maryland 21030 410.494.9093 Tel / 410.667.0925 Fax

> DATE SUBMITTED: DESIGN PLAN APPROVAL AS BUILT PLAN APPROVAL DEPARTMENT OF PUBLIC WORKS POTOMAC VALLEY ROAD SEPTEMBER 2023 SIDEWALK EXTENSION PWK# XXXX-XXXXX SCP# XXXX-XXXXX TITLE SHEET REVIEWED BY SMP# XXXX-XXXXX IFB XX-XX 111 MARYLAND AVE. ROCKVILLE, MARYLAND CHIEF, CONSTRUCTION MANAGEMENT APPROVAL DATE DIRECTOR OF PUBLIC WORKS APPROVAL DATE Election District No. (4 or 9) City of Rockville, Maryland

EROSION AND SEDIMENT CONTROL NOTES: (NOV 2016)

- 1. THE APPLICANT MUST OBTAIN INSPECTION AND APPROVAL BY THE CITY OF ROCKVILLE DEPARTMENT OF PUBLIC WORKS (DPW) AT THE FOLLOWING POINTS:
 - A. AT THE REQUIRED PRECONSTRUCTION MEETINGS. FOLLOWING INSTALLATION OF SEDIMENT CONTROL MEASURES AND PRIOR TO ANY OTHER LAND DISTURBING ACTIVITY.
 - DURING THE INSTALLATIONS OF SEDIMENT BASIN OR STORMWATER MANAGEMENT STRUCTURE AT THE REQUIRED INSPECTION POINTS (SEE INSPECTION CHECKLIST ON PLAN), NOTIFICATION PRIOR TO COMMENCING CONSTRUCTION IS MANDATORY.
 - PRIOR TO REMOVAL OR MODIFICATION OF ANY SEDIMENT CONTROL DEVICES.
 - PRIOR TO FINAL ACCEPTANCE.
- 2. ALL EROSION CONTROL MEASURES ARE TO BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH APPLICABLE PUBLISHED STANDARDS AND SPECIFICATIONS AND THE MOST CURRENT "MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL".
- 3. THE APPLICANT SHALL CONSTRUCT ALL EROSION AND SEDIMENT CONTROL MEASURES PER THE APPROVED PLAN AND CONSTRUCTION SEQUENCE, SHALL HAVE THEM INSPECTED AND APPROVED BY DPW PRIOR TO BEGINNING ANY OTHER LAND DISTURBANCES, SHALL ENSURE THAT ALL RUNOFF FROM DISTURBED AREAS IS DIRECTED TO THE SEDIMENT CONTROL DEVICES AND SHALL NOT REMOVE ANY EROSION OR SEDIMENT CONTROL MEASURES WITHOUT PRIOR PERMISSION FROM DPW.
- 4. ANY REQUEST FOR CHANGES TO THE APPROVED SEDIMENT CONTROL PLAN OR SEQUENCE OF CONSTRUCTION MUST BE SUBMITTED TO THE DPW SEDIMENT CONTROL INSPECTOR AND APPROVED BEFORE IMPLEMENTING CHANGES, MAJOR CHANGES WILL REQUIRE A PLAN REVISION.
- 5. THE APPLICANT SHALL PROTECT ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS TO PREVENT THE DESPOSITION OF MATERIALS ONTO TRAVERSED PUBLIC THOROUGHFARE(S). ALL MATERIALS DEPOSITED ONTO PUBLIC THOROUGHFARE(S) SHALL BE REMOVED IMMEDIATELY.
- 6. THE APPLICANT SHALL INSPECT DAILY AND MAINTAIN CONTINUOUSLY IN EFFECTIVE OPERATING CONDITION ALL EROSION AND SEDIMENT CONTROL MEASURES UNTIL SUCH TIME AS THEY ARE REMOVED WITH PRIOR PERMISSION FROM THE DPW SEDIMENT CONTROL INSPECTOR.
- 7. ALL SEDIMENT BASINS, TRAP EMBANKMENTS, SWALES, PERIMETER DIKES AND PERMANENT SLOPES STEEPER OR EQUAL TO 3:1 SHALL BE STABILIZED WITH SOD, SEED AND ANCHORED STRAW MULCH OR OTHER APPROVED STABILIZATION MEASURES, WITHIN SEVEN CALENDAR DAYS OF ESTABLISHMENT, ALL AREAS DISTURBED OUTSIDE OF THE PERIMETER SEDIMENT CONTROL SYSTEM MUST BE MINIMIZED AND STABILIZED IMMEDIATELY. MAINTENANCE MUST BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION, RESTABILIZATION OR OVERSEEDING WILL BE REQUIRED, IF NECESSARY.
- 8. THE APPLICANT SHALL APPLY SOD, SEED AND ANCHORED STRAW MULCH, OR OTHER APPROVED STABILIZATION MEASURES TO ALL DISTURBED AREAS WITHIN SEVEN (7) CALENDAR DAYS AFTER STRIPPING AND GRADING ACTIVITIES HAVE CEASED ON THAT AREA. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION, OTHER ACTIVE CONSTRUCTION AREAS THAT ARE NOT BEING ACTIVELY GRADED (I.E. ROUTES FOR CONSTRUCTION VEHICLES WITHIN A SITE) MAY BE REQUIRED TO BE STABILIZED AT THE DIRECTION OF THE INSPECTOR. STOCKPILES, WHICH HAVE NOT BEEN USED FOR SEVEN (7) CALENDAR DATES SHALL BE STABILIZED THROUGH THE APPLICATION OF SOD, SEED, AND ANCHORED STRAW MULCH, OR OTHER APPROVED STABILIZATION
- 9. PRIOR TO REMOVAL OF SEDIMENT CONTROL MEASURES, THE APPLICANT SHALL STABILIZE ALL CONTRIBUTORY DISTURBED AREA USING SOD OR AN APPROVED PERMANENT SEED MIXTURE WITH REQUIRED SOIL AMENDMENTS AND AN APPROVED ANCHORED MULCH, WOOD FIBER MULCH MAY ONLY BE USED IN SEEDING SEASON TO PROMOTE SHEET FLOW DRAINAGE, AREAS BROUGHT TO FINISHED GRADE DURING THE SEEDING SEASON SHALL BE PERMANENTLY STABILIZED WITHIN SEVEN (7) CALENDAR DAYS OF ESTABLISHMENT, WHEN PROPERTY IS BROUGHT TO FINISHED GRADE DURING THE MONTHS OF NOVEMBER THROUGH FEBRUARY, AND PERMANENT STABILIZATION IS FOUND TO BE IMPRACTICAL, APPROVED TEMPORARY SEED AND STRAW ANCHORED MULCH SHALL BE APPLIED TO DISTURBED AREAS. THE FINAL PERMANENT STABILIZATION OF SUCH PROPERTY SHALL BE COMPLETED PRIOR TO THE FOLLOWING APRIL 15.
- 10. THE SITE WORK, MATERIALS, APPROVED SEDIMENT CONTROL AND STORMWATER MANAGEMENT PLANS, AND ANY REQUIRED TEST REPORTS SHALL BE AVAILABLE, AT THE SITE FOR INSPECTION BY DULY AUTHORIZED OFFICIALS OF THE CITY OF ROCKVILLE.
- 11. SURFACE DRAINAGE FLOWS OVER UNSTABILIZED CUT AND FILL SLOPES SHALL BE CONTROLLED BY EITHER PREVENTING DRAINAGE FLOWS FROM TRAVERSING THE SLOPES OR BY INSTALLING MECHANICAL DEVICES TO LOWER THE WATER DOWNSLOPE WITHOUT CAUSING EROSION, DIKES SHALL BE INSTALLED AND MAINTAINED AT THE TOP OF CUT OR FILL SLOPES UNTIL THE SLOPE AND DRAINAGE AREA TO IT ARE FULLY STABILIZED, AT WHICH TIME THEY MUST BE REMOVED AND FINAL GRADING DONE TO PROMOTE SHEET FLOW DRAINAGE. MECHANICAL DEVICES MUST BE PROVIDED AT POINTS OF CONCENTRATED FLOW WHERE EROSION IS LIKELY TO OCCUR
- 12. PERMANENT SWALES OR OTHER POINTS OF CONCENTRATED WATER FLOW SHALL BE STABILIZED WITH SOD OR SEED WITH APPROVED EROSION CONTROL MATTING OR BY OTHER APPROVED STABILIZATION MEASURES.
- 13. TEMPORARY SEDIMENT CONTROL DEVICES SHALL BE REMOVED, WITH PERMISSION OF DPW, WITHIN 30 CALENDAR DAYS FOLLOWING ESTABLISHMENT OF PERMANENT STABILIZATION IN ALL CONTRIBUTORY DRAINAGE AREAS. IF ESTABLISHMENT IS NOT FULL AND UNIFORM AS DETERMINED BY THE DPW SEDIMENT CONTROL INSPECTOR, OVERSEEDING WILL BE REQUIRED, STORMWATER MANAGEMENT STRUCTURES USED TEMPORARILY FOR SEDIMENT CONTROL SHALL BE CONVERTED TO THE PERMANENT CONFIGURATION WITHIN THIS TIME PERIOD AS WELL.
- 14. NO PERMANENT CUT OR FILL SLOPE WITH A GRADIENT STEEPER THAN 3:1 WILL BE PERMITTED IN LAWN MAINTENANCE AREAS. A SLOPE GRADIENT OF UP TO 2:1 WILL BE PERMITTED IN AREAS THAT ARE NOT TO BE MAINTAINED PROVIDED THAT THOSE AREAS ARE INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN WITH A LOW-MAINTENANCE GROUND COVER SPECIFIED FOR PERMANENT STABILIZATION. SLOPE GRADIENT STEEPER THAN 2:1 WILL NOT BE PERMITTED WITH VEGETATIVE STABILIZATION.
- 15. THE APPLICANT SHALL INSTALL A SPLASH BLOCK AT THE BOTTOM OF EACH DOWNSPOUT UNLESS THE DOWNSPOUT IS CONNECTED BY A DRAIN LINE TO AN ACCEPTABLE OUTLET.
- 16. ALL WATER PUMPED FROM AN EXCAVATION DURING CONSTRUCTION SHALL BE PUMPED EITHER TO SEDIMENT TANKS AND/OR SEDIMENT TRAPS. NO WATER WILL BE PUMPED TO THE STORM DRAIN SYSTEM OR SWALE. DE-WATERING SHALL BE PERFORMED IN ACCORDANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 17. FOR FINISHED GRADING, THE APPLICANT SHALL PROVIDE ADEQUATE GRADIENTS SO AS TO: (1) PREVENT WATER FROM STANDING ON THE SURFACE OF LAWNS MORE THAN 24 HOURS AFTER THE END OF A RAINFALL, EXCEPT IN DESIGNATED DRAINAGE COURSES AND SWALE FLOW AREAS WHICH MAY DRAIN AS LONG AS 48 HOURS AFTER THE END OF A RAINFALL, AND (2) PROVIDE POSITIVE DRAINAGE AWAY FROM ALL BUILDING FOUNDATIONS OR OPENINGS.
- 18. SEDIMENT TRAPS OR BASINS ARE NOT PERMITTED WITHIN 20-FEET OF A BUILDING, WHICH EXISTS OR IS UNDER CONSTRUCTION, NO BUILDING MAY BE CONSTRUCTED WITHIN 20-FEET OF A SEDIMENT TRAP OR BASIN.
- 19. ALL INLET IN NON-SUMP AREAS SHALL HAVE ASHALT BERMS INSTALLED AT THE TIME OF BASE PAVING TO DIRECT RUNOFF TO INLETS.
- 20. THE DPW SEDIMENT CONTROL INSPECTOR HAS THE OPTION OF REQUIRING ADDITIONAL SEDIMENT CONTROL MEASURES,
- 21. ALL TRAP ELEVATIONS ARE RELATIVE TO THE OUTLET ELEVATION, WHICH MUST BE ON EXISTING UNDISTURBED GROUND.
- 22. NO CONSTRUCTION VEHICLES SHALL BE DRIVEN WITHIN THE FOOTPRINT OF THE PERMEABLE PAVEMENT. CONTRACTOR TO STABILIZE PERMEABLE PAVEMENT AREAS AT THE END OF EACH WORK DAY.

- 23. VEGETATIVE STABILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 24. TEMPORARY SEDIMENT TRAP(S) SHALL BE CLEANED OUT AND RESTORED TO THE ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO A POINT ONE-HALF THE DEPTH BETWEEN THE OUTLET CREST AND THE BOTTOM OF THE TRAP.
- 25. SEDIMENT REMOVED FROM TRAPS SHALL BE PLACED AND STABILIZED IN APPROVED AREAS IN SUCH A MANNER THAT IT DOES NOT FOUL EXISTING OR PROPOSED STORM DRAINAGE SYSTEMS OR AREAS ALREADY STABILIZED. SEDIMENT SHALL NOT BE PLACED WITHIN A FLOOD PLAIN OR WETLAND.
- 26. ALL SEDIMENT BASINS AND TRAPS MUST BE SURROUNDED WITH A WELDED WIRE SAFETY FENCE, THE FENCE MUST BE AT LEAST 42-INCHES HIGH, HAVE POSTS SPACED NO FARTHER APART THAN EIGHT-FEET, HAVE MESH OPENINGS NO GREATER THAN TWO-INCHES IN WIDTH AND FOUR-INCHES IN HEIGHT WITH A MINIMUM OF 14 GAUGE WIRE. SAFETY FENCE MUST BE MAINTAINED IN GOOD CONDITION AT ALL TIMES.
- 27. OFF-SITE SPOIL OR BORROW AREAS MUST HAVE APPROVED SEDIMENT CONTROL PLANS.
- 28. PROTECT ALL TREES TO BE PRESERVED DURING CONSTRUCTION IN ACCORDANCE WITH THE APPROVED FOREST CONSERVATION PLAN.
- 29. THE APPLICANT IS RESPONSIBLE FOR ALL ACTIONS OF CONTRACTOR AND SUBCONTRACTORS, INCLUDING REPAIRING DAMAGE TO SEDIMENT CONTROL DEVICES AND EXISTING INFRASTRUCTURE.
- 30. THE APPLICANT SHALL COMPLY WITH ALL PROVISIONS OF THE NPDES CONSTRUCTION DISCHARGE PERMIT. A COPY OF THE PERMIT AND ALL REQUIRED REPORTS SHALL BE AVAILABLE ON SITE AT ALL TIMES.

GEOTECHNICAL NOTES: (NOV 2016)

- 1. THE APPLICANT SHALL BE RESPONSIBLE FOR ALL SUBGRADE INSPECTION AND SOIL COMPACTION TESTING ASSOCIATED WITH ANY WORK WITHIN A CITY RIGHT-OF-WAY, PRIVATE PROPERTY SUBJECT TO A PUBLIC ACCESS EASEMENT, OR PRIVATE PROPERTY SUBJECT TO CITY EASEMENT FOR PUBLIC UTILITIES OR PUBLIC IMPROVEMENTS; AND/OR ANY WORK ASSOCIATED WITH A SEDIMENT CONTROL FACILITY, OR STORMWATER MANAGEMENT PRACTICE. THIS WORK SHALL BE COMPLETED BY OR UNDER THE SUPERVISION OF A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MARYLAND. FOR THE PURPOSES OF THESE NOTES AND ASSOCIATED APPROVED PLANS, THIS ENGINEER SHALL BE REFERRED TO AS THE GEOTECHNICAL ENGINEER AND SHALL BE AN INDEPENDENT FIRM FROM THE APPLICANT.
- ANY PLANS SUBJECT TO NRCS-MD POND CODE 378 STANDARDS/SPECIFICATIONS, AS SHOWN ON THE PLANS, SHALL SUPERSEDE THESE NOTES WHEN THESE NOTES ARE LESS STRINGENT OR IN CASE OF CONFLICT. ANY REFERENCE TO THE ENGINEER 378 STANDARD/SPECIFICATIONS SHALL BE THE PROFESSIONAL ENGINEER WHO STAMPED AND SEALED THE DESIGN PLANS. ANY REFERENCE TO THE GEOTECHNICAL ENGINEER SHALL BE THE GEOTECHNICAL ENGINEER AS DEFINED ABOVE OR THE GEOTECHNICAL ENGINEER WHO COMPLETED CERTAIN ASPECTS OF THE POND DESIGN.
- ALL INSPECTIONS, TESTS, SUPPORTING DATA, REPORTS, AND CERTIFICATIONS SHALL BE PROVIDED TO THE CITY OF ROCKVILLE DEPARTMENT OF PUBLIC WORKS (DPW) AND SHALL BE SEALED BY THE GEOTECHNICAL ENGINEER. DAILY INSPECTION REPORTS, IF REQUESTED BY THE CITY, CAN BE PROVIDED WITHOUT BEING IMMEDIATELY SEALED BY THE GEOTECHNICAL ENGINEER. THESE REPORTS SHALL BE COMPILED, REVIEWED, SEALED AND THEN SUBMITTED TO DPW AT A LATER DATE AS AGREED UPON BY THE CITY.
- 4. THE GEOTECHNICAL ENGINEER SHALL APPROVE ALL FILL MATERIALS THAT ARE USED FOR THE PROJECT. THE GEOTECHNICAL ENGINEER SHALL OBTAIN SAMPLES OF PROPOSED FILL MATERIALS AND PERFORM ALL REQUIRED TESTING TO DETERMINE THAT FILL MATERIALS ARE IN CONFORMANCE WITH THIS PLAN.
- 5. THE GEOTECHNICAL ENGINEER SHALL PROVIDE A REPORT THAT CERTIFIES THE SUBGRADE PREPARATION AND FILL/BACKFILL PLACEMENT ARE IN CONFORMANCE WITH THIS PLAN. THE CERTIFICATION APPLIES TO ALL FILL, BACKFILL, AND SUBGRADE OPERATIONS SUBJECT TO THIS PLAN AS DETAILED IN NOTE #1, INCLUDING UTILITY TRENCHES. WHEN CONSTRUCTING NEW ROADWAY PAVEMENT THIS CERTIFICATION REPORT SHALL BE PROVIDED PRIOR TO THE PLACEMENT OF GRADED AGGREGATE BASE (GAB). ALL OTHER CERTIFICATIONS SHALL BE PROVIDED AS REQUESTED BY THE CITY.
- 6. ALL FILL AND/OR BACKFILL MATERIAL SHALL BE FREE FROM ORGANICS, FROZEN MATERIAL, ROCKS/STONES GREATER THAN ONE AND A HALF INCHES IN ANY DIMENSION, WASTE METAL PRODUCT, UNSIGHTLY DEBRIS, TOXIC MATERIAL, OR OTHER DELETERIOUS MATERIALS; SHALL BE A MINIMUM OF 105 POUNDS PER CUBIC FOOT FOR THE MAXIMUM DRY DENSITY ACCORDING TO AASHTO T-180, METHOD C; AND SHALL NOT HAVE A LIQUID LIMIT GREATER THAN 30 NOR A PLASTICITY INDEX GREATER THAN SIX ACCORDING TO ASTM D-4318. ALL OTHER MATERIALS SHALL MEET THE REQUIREMENTS STATED IN CATEGORY 900 OF THE LATEST EDITION OF THE MARYLAND STATE HIGHWAY ADMINISTRATION (MSHA) STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS.
- COMPACT THE MATERIAL THAT IS ONE FOOT BELOW THE TOP OF SUBGRADE TO AT LEAST 92 PERCENT OF THE MAXIMUM DRY DENSITY PER AASHTO T-180, COMPACT THE TOP ONE FOOT TO AT LEAST 97 PERCENT OF THE MAXIMUM DRY DENSITY, WHEN NECESSARY, ADD WATER OR DRY THE LAYER IN ORDER TO COMPACT TO THE REQUIRED DENSITY. GENERALLY THE MATERIAL SHALL BE WITHIN TWO PERCENT OF THE OPTIMUM MOISTURE CONTENT BUT MAY BE OUTSIDE OF THIS RANGE IF APPROVED BY THE GEOTECHNICAL ENGINEER.
- FILL AND BACKFILL MATERIALS MUST COMPLETELY FILL ALL SPACES UNDER AND ADJACENT TO THE STRUCTURE OR PIPE. FOR STORMWATER MANAGEMENT EMBANKMENTS, THE APPLICANT SHALL SCARIFY EACH LIFT WITH A SHEEPSFOOT ROLLER OR CLAW TO MINIMUM DEPTH OF TWO-INCHES PRIOR TO PLACING THE NEXT LIFT. THE APPLICANT SHALL SCARIFY EMBANKMENTS PARALLEL WITH THE CENTERLINE OF THE DAM CORE AND PERPENDICULAR TO THE PRINCIPAL SPILLWAY. BEDDING SHALL BE PROVIDED IN ACCORDANCE WITH DETAILS INDICATED ON THE CONSTRUCTION DRAWINGS. AT NO TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN FOUR-FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE, UNDER NO CIRCUMSTANCES SHALL THE APPLICANT DRIVE EQUIPMENT OVER ANY PART OF A CORRUGATED METAL PIPE UNLESS THERE IS A COMPACTED FILL OF 24-INCHES OR GREATER OVER THE STRUCTURE OR PIPE.
- 9. AT A MINIMUM, COMPACTION TESTS SHALL BE COMPLETED FOR EVERY LIFT OF FILL OR BACKFILL. THE TESTING FREQUENCY SHALL BE AT LEAST ONCE PER 150 LINEAR FEET OF TRENCH OR ONCE PER 1,500 SQUARE FEET OF FILL. AT A MINIMUM, THERE SHALL BE AT LEAST ONE COMPACTION TEST PER LIFT AND AT LEAST TWO COMPACTION TESTS PER DAY. THE GEOTECHNICAL ENGINEER SHALL SUPPLY DPW WITH CERTIFIED COMPACTION TEST RESULTS, INCLUDING CERTIFICATION OF PIPE BEDDING SUBGRADE AND FILL SUBGRADE.
- 10. PRIOR TO PLACING ANY ROADWAY FILL ON EXISTING GRADES (ORIGINAL GRADE AFTER TOPSOIL HAS BEEN STRIPPED, FILL PREPARED BY OTHERS OUTSIDE OF THIS PLAN OR FILL NOT PREPARED UNDER THE SUPERVISION OF THE GEOTECHNICAL ENGINEER), SCARIFY THE MINIMUM TOP EIGHT-INCHES OF SOIL MATERIAL. COMPACT THIS LAYER TO THE COMPACTION REQUIREMENTS IN THESE NOTES. PROOF-ROLL THIS COMPACTED LAYER USING FULLY LOADED DUMP TRUCK (MINIMUM 20 TON PAYLOAD CAPACITY). THE GEOTECHNICAL ENGINEER SHALL INSPECT THE PROOF-ROLLING AND DETERMINE IF THE SUBGRADE IS ACCEPTABLE OR IF THERE ARE AREAS THAT REQUIRE REMEDIATION. SUBGRADE AREAS THAT FAIL PROOF-ROLLING SHALL BE REMEDIATED TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER BY EITHER OF THE FOLLOWING METHODS:
 - SCARIFYING, MOISTURE CONDITIONING, AND RE-COMPACTION OF THE SUBGRADE MATERIALS. UNDERCUTTING SOFT OF UNSUITABLE AREAS OF SUBGRADE AND BACFILLING WITH COMPACTED SELECT BORROW (MSHA SECTION 916).
 - C. UNDERCUTTING OF SOFT OR UNSUITABLE AREAS OF SUBGRADE AND PLACING A LAYER OF GEOTEXTILE COVERED BY #MSHA 57 COARSE AGGREGATE (TABLE 901A).

DPW MAY APPROVE AN ALTERNATE APPROACH FOR SOIL REMEDIATION/IMPROVEMENT IF IT IS RECOMMENDED AND SEALED BY THE GEOTECHNICAL ENGINEER.

- 11. EXCEPT WHEN SPECIFIED, DO NOT PLACE LAYERS EXCEEDING EIGHT-INCHES UN-COMPACTED DEPTH. PLACE THE MATERIAL IN HORIZONTAL LAYERS ACROSS THE FULL WIDTH OF THE EMBANKMENT, PERFORM ALL ROLLING IN A LONGITUDINAL DIRECTION ALONG THE EMBANKMENT. BEGIN AT THE OUTER EDGES AND PROGRESS TOWARDS THE CENTER. VARY THE TRAVEL PATHS OF TRAFFIC AND EQUIPMENT OVER THE WIDTH OF THE EMBANKMENT TO AID IN OBTAINING UNIFORM COMPACTION.
- 12. UNIFORMLY GRADE AREAS TO A SMOOTH SURFACE, FREE OF IRREGULAR SURFACE CHANGES. GRADE AND PREPARE THE SUBGRADE SECTION TO THE LINES, GRADES, CROSS SECTIONS AND/OR ELEVATIONS SHOWN ON THE PLANS. AT ALL TIMES, MAINTAIN THE SUBGRADE SURFACE IN SUCH CONDITION AS TO READILY DRAIN.
- 13. DO NOT PLACE BACKFILL OR FILL SOIL MATERIAL ON SURFACES THAT ARE MUDDY, FROZEN, OR CONTAIN FROST OR ICE. VEHICULAR AND EQUIPMENT TRAFFIC SHALL BE DISTRIBUTED ACROSS THE PREPARED SURFACE IN SUCH A MANNER AS TO PREVENT DISTURBANCE. REPAIR ANY DAMAGE TO THE PREPARED SUBGRADE TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER. THE GEOTECHNICAL ENGINEER MUST APPROVE THE STORAGE OR STOCKPILING OF HEAVY LOADS ON A ROADWAY SUBGRADE.

- 14. UNSUITABLE EXISTING FILL, SOFT OR LOOSE NATURAL SOILS, ORGANIC MATERIAL, AND RUBBLE SHALL BE STRIPPED TO APPROVED GRADES AS DETERMINED BY THE GEOTECHNICAL ENGINEER.
- 15. PROTECT ALL STRUCTURES AND UTILITIES FROM ANY DAMAGE IN THE HANDLING, PROCESSING OR COMPACTING OF EMBANKMENT OR BACKFILL MATERIAL. EXERCISE CAUTION NEAR ARCHES, RETAINING WALLS, CULVERTS AND UTILITY TRENCHES TO PREVENT UNDUE STRAIN OR MOVEMENT, THE GEOTECHNICAL ENGINEER MAY REQUIRE THE USE OF SPECIALLY SELECTED MATERIAL ADJACENT TO STRUCTURES TO PROTECT AGAINST DAMAGE, DO NOT USE ROCK GREATER THAN ONE AND A HALF INCHES IN ANY DIMENSION ADJACENT TO STRUCTURES.
- 16. WHEN PLACING AND COMPACTING EMBANKMENT ON HILLSIDES OR AGAINST EXISTING EMBANKMENT, CONTINUOUSLY BENCH THE SLOPES WHERE THE SLOPE IS STEEPER THAN 4:1 WHEN MEASURED AT RIGHT ANGELS TO THE ROADWAY OR EMBANKMENT CENTERLINE. PERFORM THE BENCHING OPERATION AS THE EMBANKMENT IS CONSTRUCTED IN LAYERS. MAINTAIN A BENCH WIDTH OF AT LEAST FIVE-FEET, BEGIN EACH HORIZONTAL CUT AT THE INTERSECTION OF THE ORIGINAL GROUND AND THE VERTICAL SIDES OF THE PREVIOUS CUTE. IF THE MATERIAL CUT FROM THE BENCHES MEETS FILL REQUIREMENTS, COMPACT THIS MATERIAL ALONG WITH THE NEW EMBANKMENT MATERIAL.
- 17. WHEN PLACING FILL OVER EXISTING PAVEMENT, THOROUGHLY BREAK UP, SCARIFY, OR REMOVE THE PAVEMENT AS SPECIFIED OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
- 18. PRIOR TO THE PLACEMENT OF ASPHALT PAVEMENT, PROOF-ROLL THE COMPACTED GRADED AGGREGATE BASE (GAB) LAYER USING A FULLY LOADED DUMP TRUCK (MINIMUM 20 TON PAYLOAD CAPACITY). THE GEOTECHNICAL ENGINEER SHALL INSPECT THE PROOF-ROLLING AND DETERMINE IF THE GAB IS ACCEPTABLE OR IF THERE ARE AREAS THAT REQUIRE REMEDIATION, GAB AREAS THAT FAIL PROOF-ROLLING SHALL BE REMEDIATED TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER BY EITHER OF THE FOLLOWING METHODS:
 - SCARIFYING, MOISTURE CONDITIONING, AND RE-COMPACTION OF THE GAB MATERIALS. UNDERCUTTING SOFT OF UNSUITABLE AREAS OF GAB AND REPLACING WITH COMPACTED GAB.

DPW MAT APPROVE AN ALTERNATE APPROACH FOR GAB REMEDIATION/IMPROVEMENT IF IT IS RECOMMENDED AND SEALED BY THE GEOTECHNICAL ENGINEER. THE GEOTECHNICAL ENGINEER SHALL PROVIDE A SEALED APPROVAL OF THE GAB PRIOR TO PLACEMENT OF ASPHALT, DPW MAY ACCEPT AN ORAL OR EMAIL APPROVAL WHILE THE FINAL APPROVAL AND REPORTS ARE BEING COMPILED AND COMPLETED.

STABILIZATION NOTE:

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTRBANCE, PERMANENT OR TEMPORARY STABILIZATION WILL BE COMPLETED WITHIN: THREE CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER

SEVEN CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE DEVELOPMENT PROJECT NOT UNDER ACTIVE GRADING.

MAINTENANCE WILL BE PERFORMED, AS NECESSARY, TO ENSURE THAT THE STABILIZED AREAS CONTINUOUSLY MEET THE APPROPRIATE REQUIREMENTS OF THE CURRENT MDE AND CITY STANDARDS AND SPECIFICATIONS.

SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1).

STANDARD SEQUENCE OF CONSTRUCTION:

THE PERMITTEE MUST CONTACT MISS UTILITY AT 1-800-257-7777 FOR MARKING OF UTILITIES, TREE PROTECTION MEASURES, AND LIMITS OF DISTURBANCE MUST BE MARKED PRIOR TO THE PRE-CONSTRUCTION MEETING, REQUIREMENTS FOR STORMWATER MANAGEMENT INSPECTIONS AND SUBMISSION OF AS-BUILT DRAWINGS, INCLUDING MATERIALS TICKETS MUST BE DISCUSSED AT THE PRE-CONSTRUCTION MEETING.

ALL TREE REMOVAL AND TREE IMPACT MITIGATION MEASURES MUST BE PERFORMED BY A CONTRACTOR WHO IS BOTH AN ISA CERTIFIED ARBORIST AND A MD LICENSED TREE EXPERT.

- 1. THE PERMITTEE MUST HOLD A PRE-CONSTRUCTION MEETING AT THE SITE WITH AUTHORIZED REPRESENTATIVES OF THE DEPARTMENT OF PUBLIC WORKS (DPW) AND THE FORESTRY INSPECTOR BEFORE COMMENCING ANY LAND DISTURBANCE ACTIVITY. THE LOD SHALL BE STAKED OUT PRIOR TO HOLDING THE PRE-CONSTRUCTION MEETING. THE SPECIFIC PROJECT SEQUENCE WILL BE DISCUSSED AT THE PRE-CONSTRUCTION MEETING. THE PERMITTEE SHALL CONTACT THE FOLLOWING WITH A MINIMUM OF 48 HOURS NOTICE TO SCHEDULE THE PRE-CONSTRUCTION MEETING:
 - CITY SEDIMENT CONTROL (SC) INSPECTOR AS LISTED ON PERMIT
 - CITY PROJECT INSPECTOR AS LISTED ON PERMIT CITY STORMWATER MANAGEMENT INSPECTOR AS LISTED ON PERMIT
 - FORESTRY INSPECTOR AS LISTED ON PERMIT
 - E. THE PERMITTEE AND CONTRACTOR MUST ALSO BE PRESENT AT THE PRE-CONSTRUCTION MEETING
- 2. WHEN APPLICABLE AND WITH THE FORESTRY INSPECTOR'S PERMISSION, PERFORM TREE IMPACT MITIGATION MEASURES AND INSTALL TREE SAVE FENCE. CLEAR TREES AND CALL THE FORESTRY INSPECTOR FOR INSPECTION AND PERMISSION TO PROCEED.
- 3. WITH THE CITY SC INSPECTOR'S PERMISSION INSTALL SEDIMENT CONTROL MEASURES. NO FURTHER ACTIVITY IS PERMITTED UNTIL THE SC INSPECTOR CONFIRMS THAT ALL REQUIRED SEDIMENT CONTROL MEASURES ARE PROPERLY INSTALLED.
- 4. SEDIMENT CONTROL AND TREE PROTECTION DEVICES WILL BE MAINTAINED IN ACCORDANCE WITH ALL APPLICABLE MDE AND CITY OF ROCKVILLE REGULATIONS.
- 5. BEGIN GRUBBING AND ROUGH GRADING. ALL DIRT AND MATERIALS MUST BE STORED WITHIN THE LIMITS OF DISTURBANCE.
- 6. BEGIN CONSTRUCTION.
- 7. FINE GRADE AND TOPSOIL PER STANDARDS AND SPECIFICATIONS FOR TOPSOILING ON THIS PLAN.
- 8. COMPLY WITH ALL REQUIREMENTS OF THE FORESTRY PERMIT, AS APPLICABLE, ONCE THE SITE IS STABILIZED AND WITH THE CITY'S SC INSPECTOR'S PERMISSION, REMOVE THE SEDIMENT CONTROL MEASURES AND STABILIZE THE AREAS DISTURBED BY THEIR REMOVAL.

DESCRIPTION OF REVISION P.E. INITIAL DATE DPW DATE APPROVAL OF REVISIONS AFTER INTIAL PLAN APPROVAL



WALLACE MONTGOMERY

BEFORE BEGINNING CONSTRUCTION

WWW.MISSUTILITY.NET OR 1-800-257-7777 OR 811

AT LEAST 48 HOURS PRIOR TO EXCAVATION

CONTACT "MISS UTILITY"

unt Valley, Maryland 21030 10.494.9093 Tel / 410.667.0925 Fax

DEPARIMENT OF PUBLIC WORKS I.L.T. CITY OF 111 MARYLAND AVE. ROCKVILLE, MARYLAND

DIRECTOR OF PUBLIC WORKS APPROVAL DATE

PWK# XXXX-XXXXX SMP# XXXX-XXXXX

DESIGN PLAN APPROVAL

___ SCP# XXXX-XXXXX REVIEWED BY CHIEF, CONSTRUCTION MANAGEMENT APPROVAL DATE

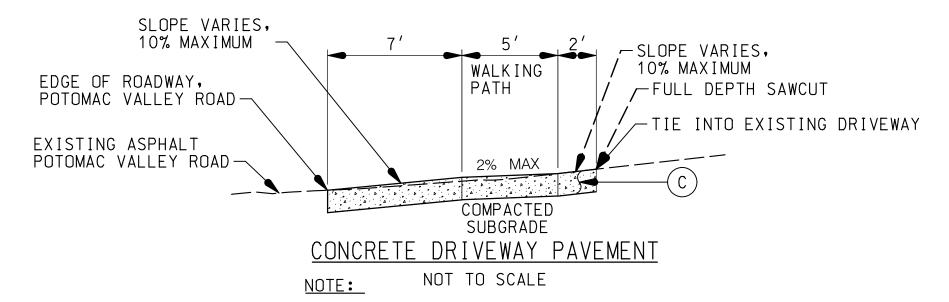
AS BUILT PLAN APPROVAL

EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

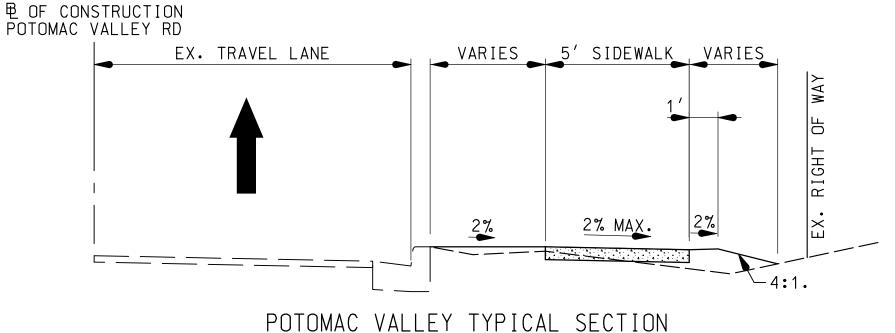
POTOMAC VALLEY ROAD SIDEWALK EXTENSION

Election District No. (4 or 9) City of Rockville, Maryland

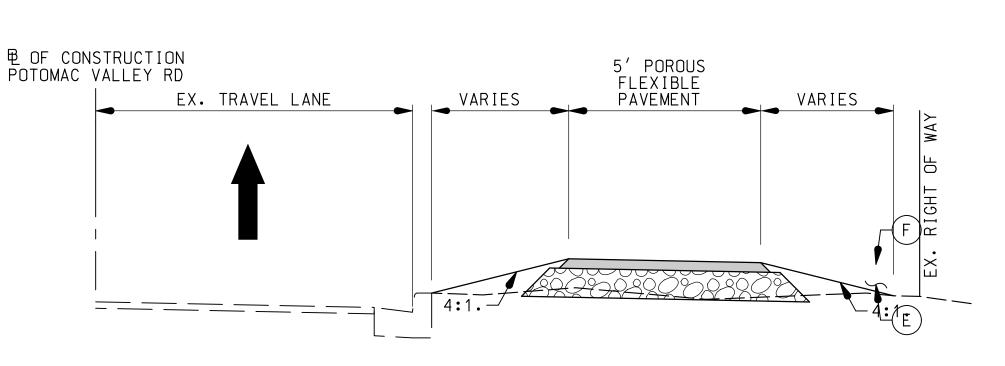
DATE SUBMITTED: SEPTEMBER 2023 IFB XX-XX N.T.S.



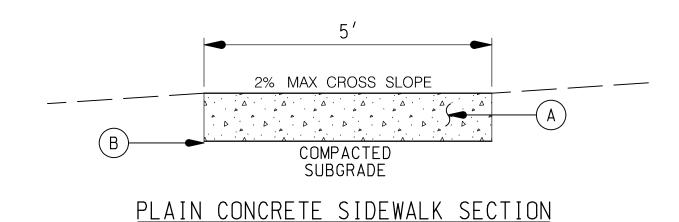
1. SEE DETAIL B - DRIVEWAY APRON WITH BUFFER CITY OF ROCKVILLE STANDARD NO. CM-1.1, ON SHEET 8



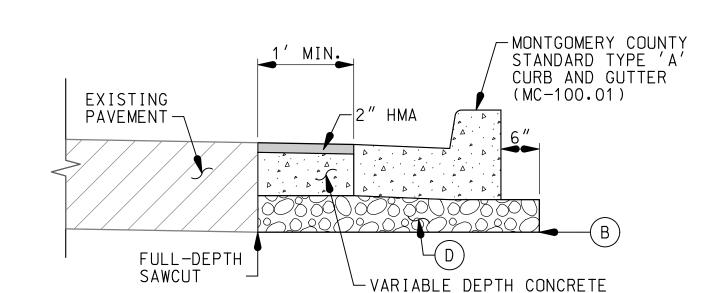
STA. 0+62 TO STA. 2+84 STA. 8+96 TO STA. 12+44 STA. 16+14 TO STA. 16+33 NOT TO SCALE



POROUS FLEXIBLE TYPICAL SECTION STA. 0+00 TO STA. 0+65 STA. 12+44 TO STA. 16+14 NOT TO SCALE



NOT TO SCALE



CURB AND GUTTER REPLACEMENT DETAIL NOT TO SCALE

CURB AND GUTTER REPLACEMENT NOTES:

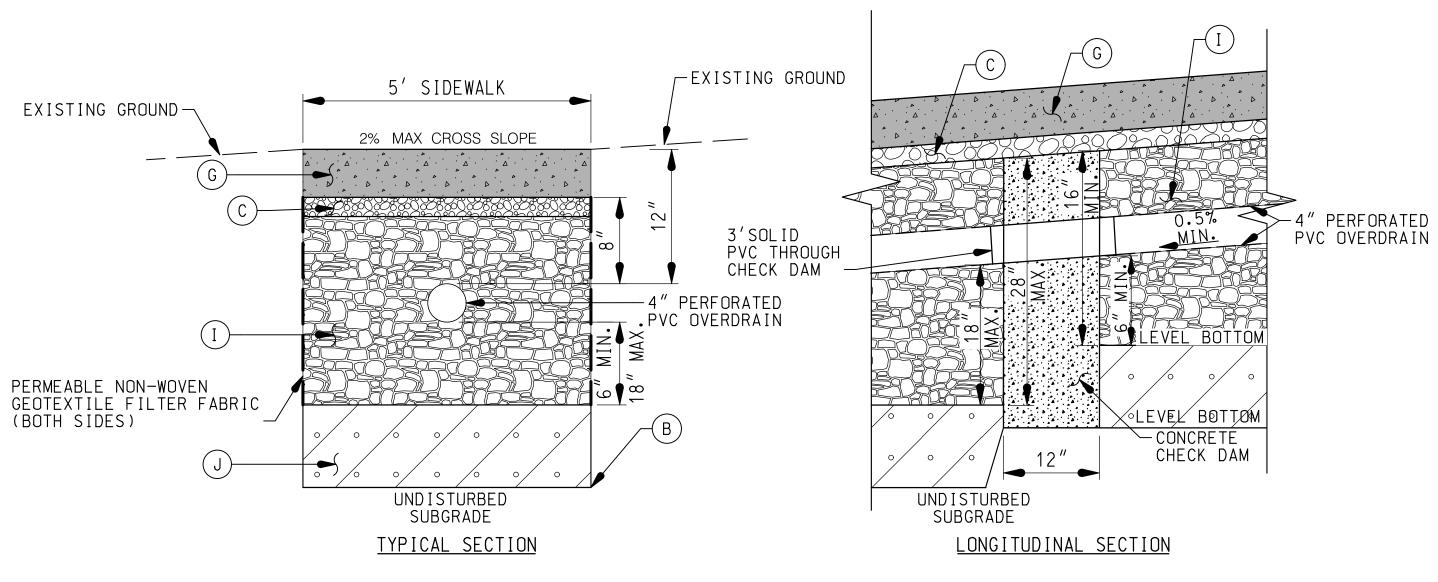
1. 2" HMA AND VARIABLE DEPTH CONCRETE FOR SLOT BACKFILL SHALL BE INCIDENTAL TO CURB AND GUTTER REPLACEMENT

DETAIL LEGEND

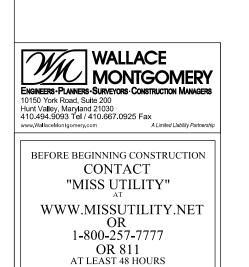
- (A) 4" CONCRETE SIDEWALK
- (B) LIMITS OF EXCAVATION
- 9" PLAIN CONCRETE
- 6" BASE COURSE USING GRADED AGGREGATE (COST INCIDENTAL TO PRICE FOR CURB & GUTTER)
- E 4-6" BASE COURSE USING GRADED AGGREGATE
- (F) 2" PORIOUS FLEXIBLE PAVEMENT
- (G) 4" PERVIOUS CONCRETE
- 16" MIN. NO. 2 STONE
- VARIABLE DEPTH HMA SUPERPAVE, 19.0MM FOR BASE, PG 64-22, LEVEL 2 (FOR SLOT BACKFILL, INCIDENTAL TO CURB AND GUTTER)
- $(\ \mathsf{J} \) \ \mathsf{6}'' \ \mathsf{ASTM} \ \mathsf{C}\mathsf{-33} \ \mathsf{FINE} \ \mathsf{AGGREGATE}$ CONCRETE SAND

PERVIOUS SIDEWALK NOTES:

- 1. CONTRACTOR SHALL INSTALL PERVIOUS CONCRETE SIDEWALK PER SPECIFICATIONS.
- 2. CONCRETE JOINTS TO BE INSTALLED EVERY 8' MINIMUM.
- 3. 6" MIN. OF STONE IS REQUIRED BELOW OVERDRAIN PIPE. 12" MINIMUM COVER FROM TOP OF SIDEWALK TO TOP OF OVERDRAIN PIPE. 6" MINIMUM BETWEEN BOTTOM OF SIDEWALK CONCRETE AND TOP OF OVERDRAIN PIPE.
- 4. SUBGRADE BOTTOM MUST BE LEVEL. INSTALL STEPS AS NEEDED TO MAINTAIN MINIMUM 16 INCHES MINIMUM DEPTH OF AGGREGATE, CHECK DAM (PORTLAND CEMENT CONCRETE MIX NO. 3) AND STEPS SHALL BE INSTALLED AT 28 INCHES MAXIMUM DEPTH OF AGGREGATE. SEE LONGITUDINAL SECTION ABOVE.
- 5. CONSTRUCTION SPECIFICATIONS SHALL MEET MDE STORMWATER DESIGN MANUAL APPENDIX B-4., PERMEABLE PAVEMENT SPECIFICATIONS FROM MONTGOMERY COUNTY DPS.
- CONTRACTOR SHALL INSTALL 4" CLEANOUTS FOR OVERDRAIN, WITH FLUSH CAP SET IN SIDEWALK CONCRETE. CLEANOUTS SHALL BE PLACED AT THE UPSTREAM END OF THE OVERDRAIN, AT BENDS GREATER THAN 45°, AND AT A MAXIMUM OF 200 FEET SPACING BETWEEN.
- 7. RETAINING WALL UNDERDRAIN AND OVERDRAIN PERFORATIONS SHALL BE 3/8" DIAMETER, 4" ON CENTER, AND 90° AROUND PIPE.



PERVIOUS CONCRETE SIDEWALK NOT TO SCALE



NO.	DESCRIPTION OF REVISION	P.E. INITIAL	DATE	DPW	DATE
	APPROVAL OF REVISIONS	: AFTER INITIAL		OV/AI	



PRIOR TO EXCAVATION

DEPARTMENT OF PUBLIC WORKS CITY OF 111 MARYLAND AVE. ROCKVILLE, MARYLAND

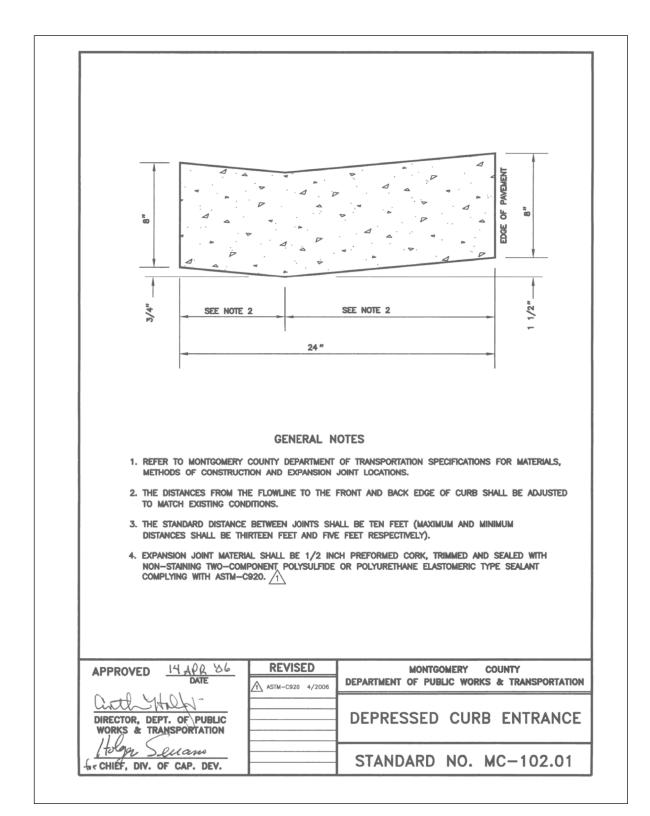
DESIGN PLAN APPROVAL AS BUILT PLAN APPROVAL PWK# XXXX-XXXXX ____ SCP# __XXXX-XXXXX REVIEWED BY SMP# XXXX-XXXXX CHIEF, CONSTRUCTION MANAGEMENT APPROVAL DAT IRECTOR OF PUBLIC WORKS APPROVAL DATE

POTOMAC VALLEY ROAD TYPICAL SECTIONS SIDEWALK EXTENSION & DETAILS

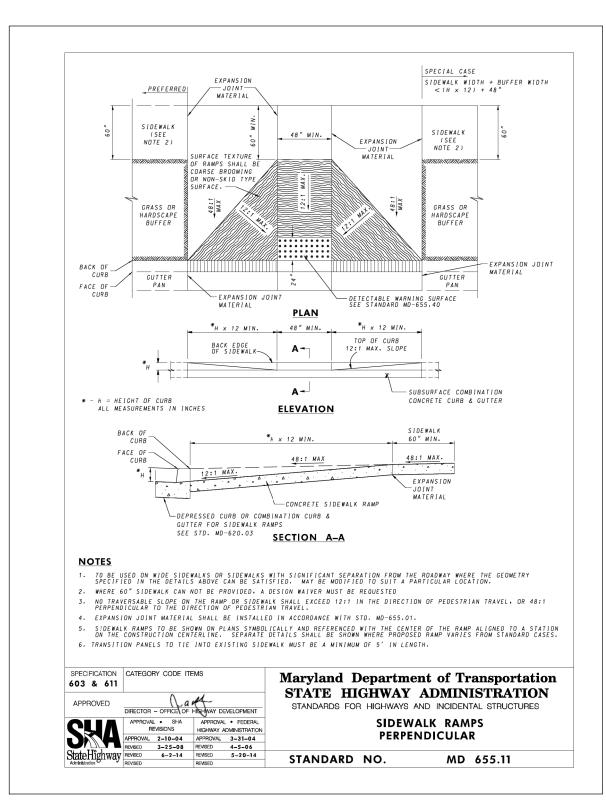
Election District No. (4 or 9) City of Rockville, Maryland

SEPTEMBER 2023 SCALE IFB XX-XX

FILE SHEET

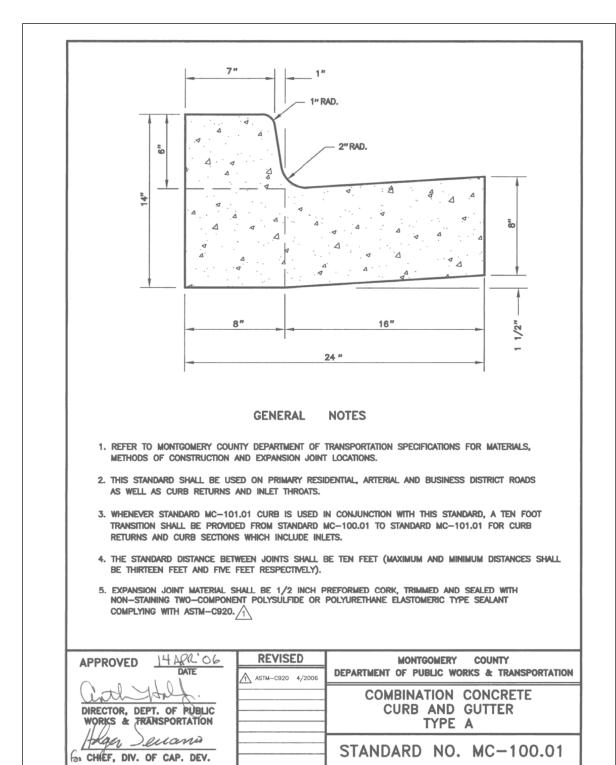


<u>DETAIL A - DEPRESSED CURB ENTRANCE</u> <u>MONTGOMERY COUNTY STANDARD NO. MC-102.01</u>

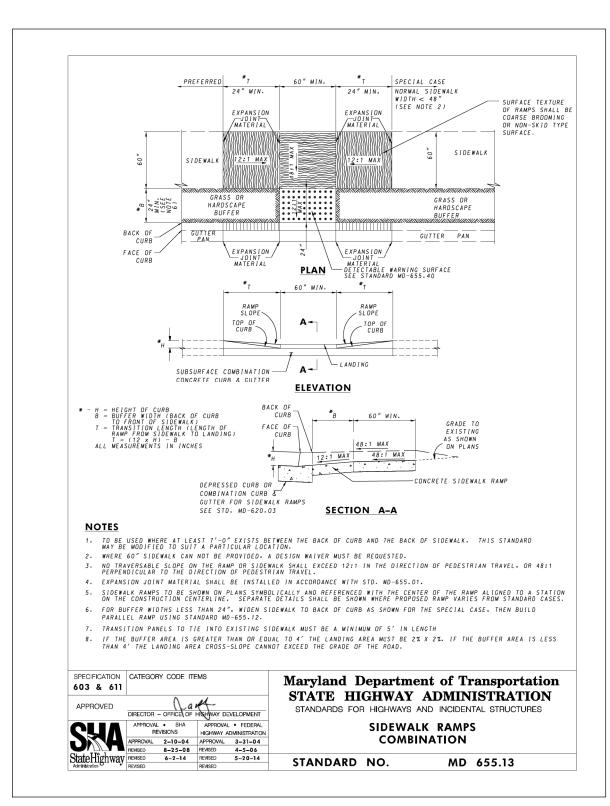


<u>DETAIL E - SIDEWALK RAMPS PERPENDICULAR STANDARD NO. MD 655.11</u>

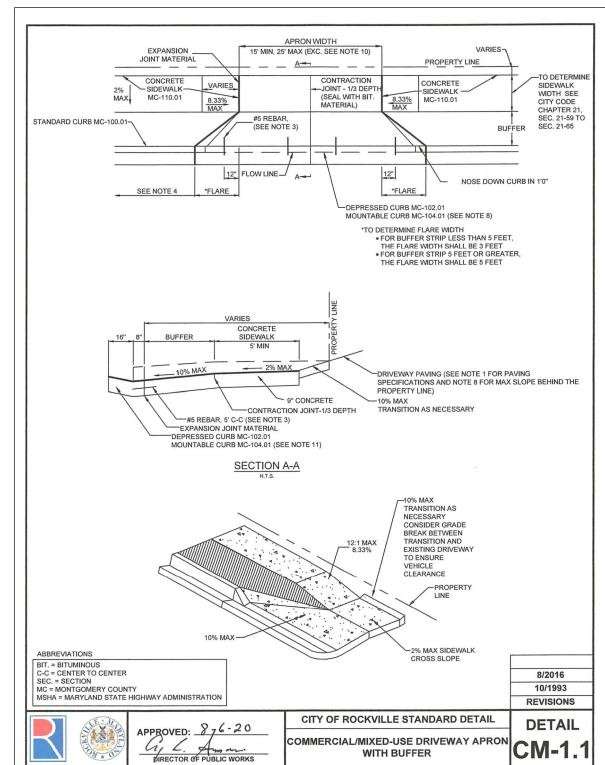
- 1. WHEN SIDE FLARE IS NOT PART OF THE WALKING PATH, THE SLOPE MAY BE GREATER THAN 12:1
- 2. SIDE FLARES FOR THIS PROJECT HAVE BEEN DESIGNED TO BE 2' WIDE AT THE CURB.



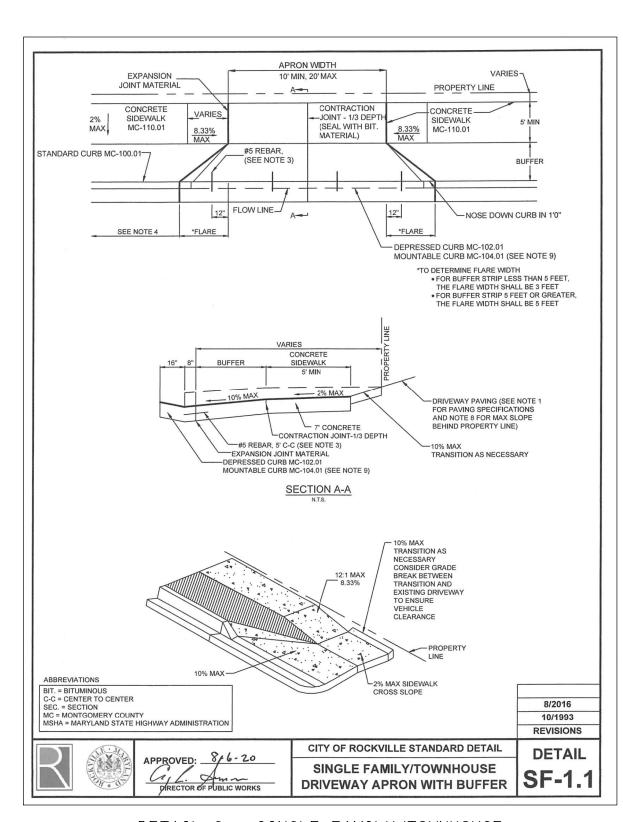
<u>DETAIL B - TYPE 'A' COMBINATION</u>
<u>CONCRETE CURB & GUTTER</u>
<u>MONTGOMERY COUNTY STANDARD NO. MC-100.01</u>

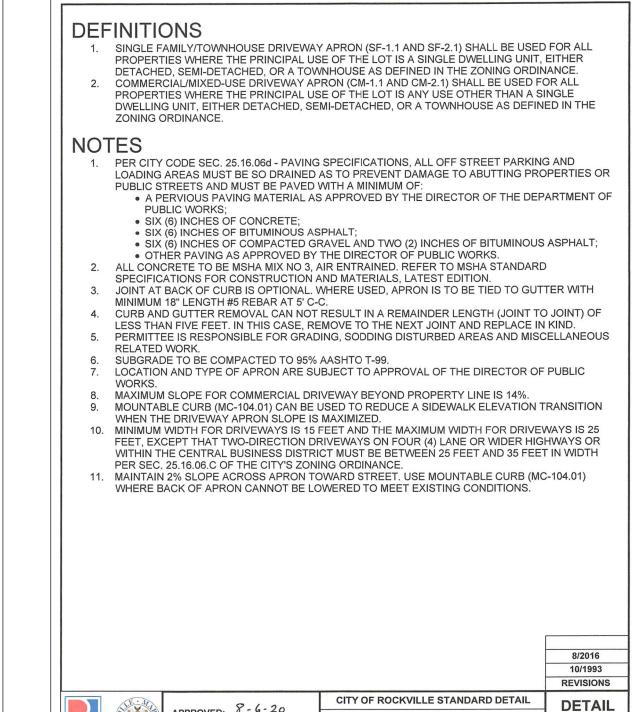


DETAIL F - SIDEWALK RAMPS COMBINATION STANDARD NO. MD 655.13



DETAIL C - COMMERCIAL/ MIXED-USE
DRIVEWAY APRON WITH BUFFER
CITY OF ROCKVILLE STANDARD NO. CM-1.1

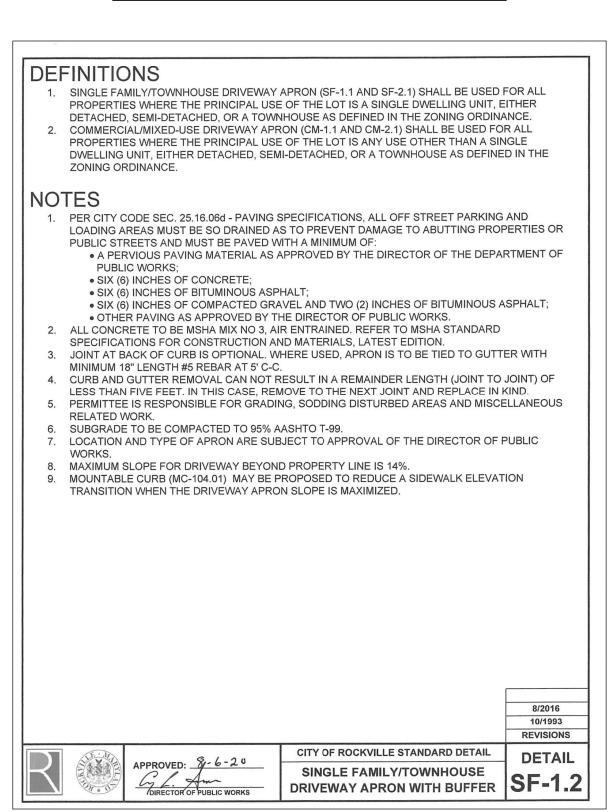




DETAIL D - COMMERCIAL/ MIXED-USE DRIVEWAY APRON WITH BUFFER CITY OF ROCKVILLE STANDARD NO. CM-1.2

OMMERCIAL/MIXED-USE DRIVEWAY APR WITH BUFFER

APPROVED: 8-6-20



DETAIL H - SINGLE FAMILY/TOWNHOUSE DRIVEWAY APRON WITH BUFFER CITY OF ROCKVILLE STANDARD NO. SF-1.2



AT LEAST 48 HOURS PRIOR TO EXCAVATION

Rockville

	DEPARTMENT OF PUBLIC WORKS
	CITY OF
	ROCKVILLE
11	MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGN PLAN APPROVAL AS BUILT PLAN APPROVAL ____ SCP# __XXXX-XXXXX PWK# XXXX-XXXXX REVIEWED BY SMP# XXXX-XXXXX DIRECTOR OF PUBLIC WORKS APPROVAL DATE CHIEF, CONSTRUCTION MANAGEMENT APPROVAL DATE

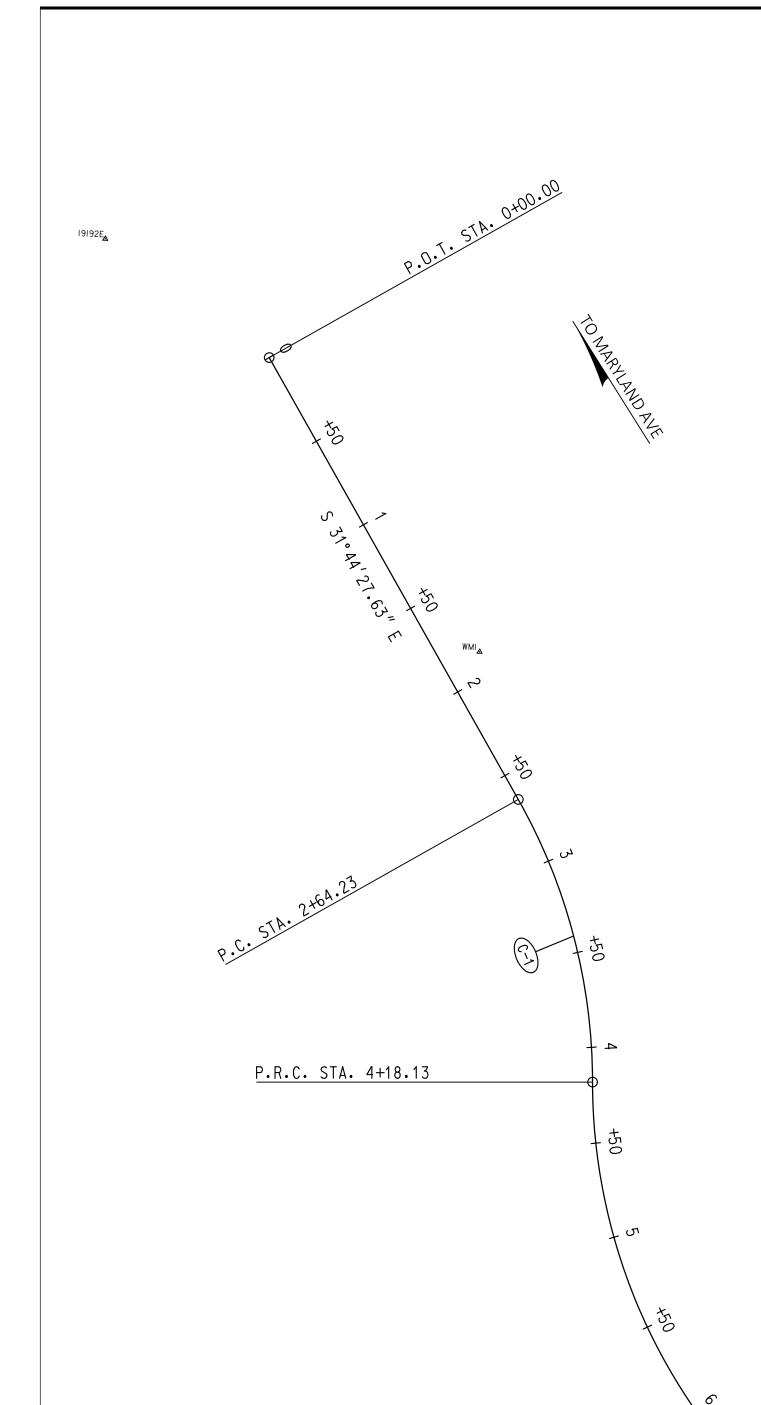
STANDARD DETAILS PLAN POTOMAC VALLEY ROAD SIDEWALK EXTENSION

Election District No. (4 or 9) City of Rockville, Maryland

DESCRIPTION OF REVISION P.E. INITIAL DATE DPW APPROVAL OF REVISIONS AFTER INTIAL PLAN APPROVAL DATE SUBMITTED: SHEET SEPTEMBER 2023

SCALE

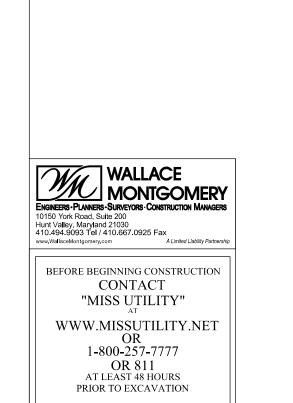
IFB XX-XX



		₽ OF CONST	RUCTION	
POINT	STATION	BEARING		
DESCR.	DESCR. STATION NORTH		EAST	DEARING
		POTOMAC VALL	EY ROAD	
P . 0.T.	0+00.00	513,277.7051	1,266,247.5931	S 31° 44′27.63" E
P.C.	2+64.23	513,052.9980	1,266,386.5973	
P.R.C.	4+18.13	512,907.4649	1,266,431.2150	S 2°20′53 . 07" E
P.T.	8+90.01	512,620.0347	1,266,743.8926	N 07971/47 FCU F
P.C.	12+09.42	512,633.8011	1,267,063.0127	N 87°31′47 . 56" E
P.R.C.	12+33.20	512,625.7931	1,267,084.7403	S 47°03′58.04" E
P.R.C.	12+78.71	512,626.1739	1,267,126.0110	N 46°00′33.86" E
P.T.	13+00.52	512,634.5655	1,267,145.6288	
P.O.T.	16+71.25	512,649.6224	1,267,516.0465	N 87° 40′20.29" E

CURVE DATA								
CURVE	DELTA	Dc	RADIUS	TANGENT	LENGTH	EXTERNAL		
C-I	29°23′34.6" RT.	19° 05′54 . 9"	300.00′	78 . 68′	153.90′	10.15′		
C-2	90°07′19.4" LT.	19° 05′54 . 9"	300.00′	300.64′	471.88′	124.72′		
C-3	45°24′14.4" RT.	190° 59′09 . 4"	30.00′	12.55′	23.77′	2.52′		
C-4	86°55′27 . 5" LT.	190° 59′09 . 4"	30.00′	28.43′	45 . 51′	II . 33′		
C-5	41° 39′46.4" RT.	190° 59′09 . 4"	30.00′	11.41′	21.81′	2.10′		

CONTROL TRAVERSE						
POINT NO.	COORDINATES					
POINT NO.	NORTH	EAST				
TRAV.PT 9192E	513,336.04	1,266,159.76				
TRAV.PT WM I	513,129.01	1,266,363.32				
TRAV.PT WM 2	512,690.50	1,266,502.17				
TRAV.PT WM 3	512,643.69	1,266,785.59				
TRAV.PT WM 4	512,654.41	1,267,030.45				
TRAV.PT WM 5	512,668.51	1,267,457.09				



NO. DESCRIPTION OF REVISION P.E. INITIAL DATE DPW DATE

Rockville Get Into It DEPARTMENT OF PUBLIC WORKS

CITY OF

ROCKVILLE

111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGN PLAN APPROVAL

PWK# XXXX-XXXXX SCP# XXXX-XXXXX

SMP# XXXX-XXXXXX

REVIEWED BY

XX

XX

POTOMAC VALLEY ROAD

N 87°31′47.56″ E

AS BUILT PLAN APPROVAL

GEOME
CONSTR

CHIEF, CONSTRUCTION MANAGEMENT APPROVAL DATE

GEOMETRIC LAYOUT & POTO CONSTRUCTION STAKEOUT SIDE

N 87°40′20.29″ E

TO NEW MARK ESPLANADE

POTOMAC VALLEY ROAD
SIDEWALK EXTENSION

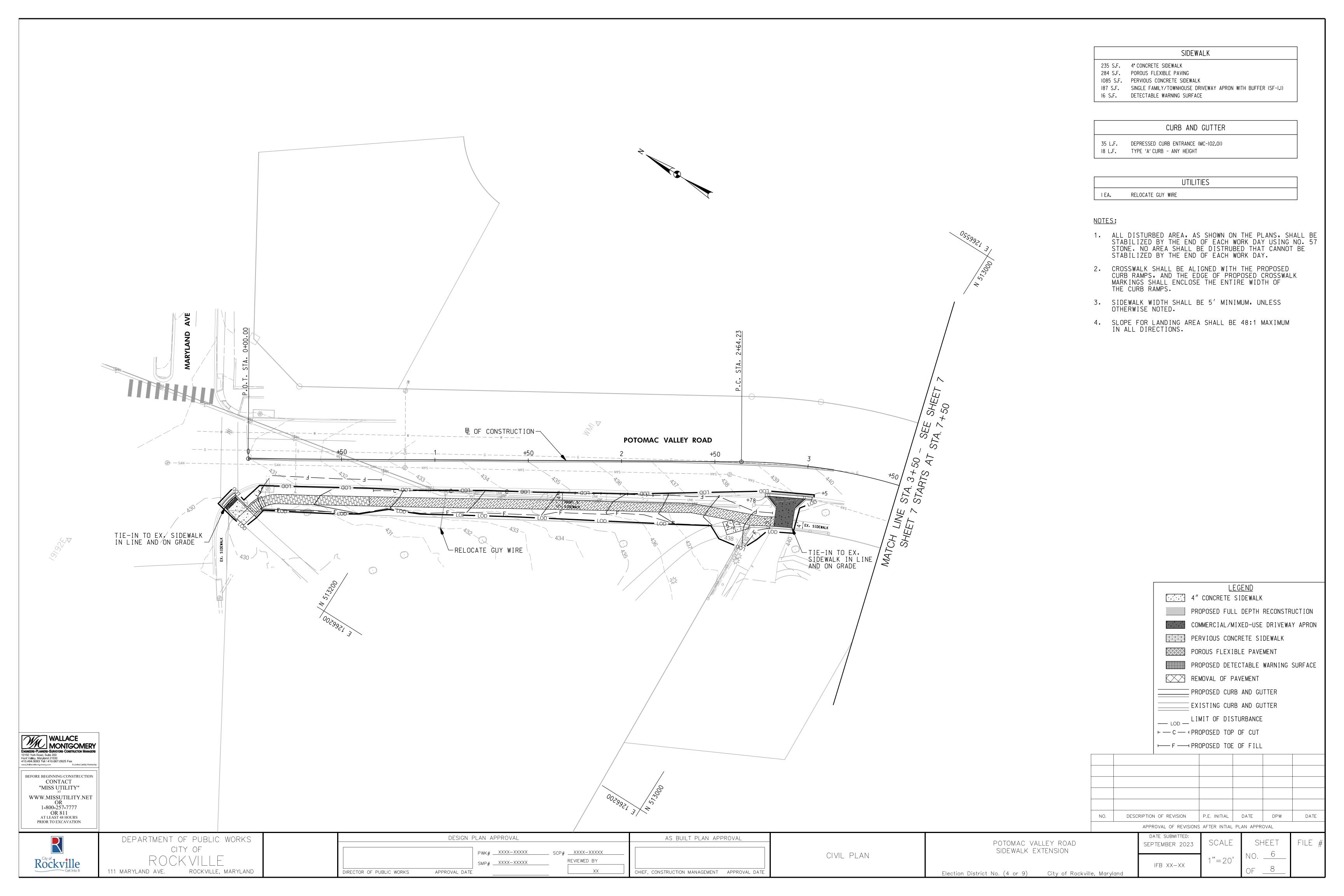
Election District No. (4 or 9) City of Rockville, Maryland

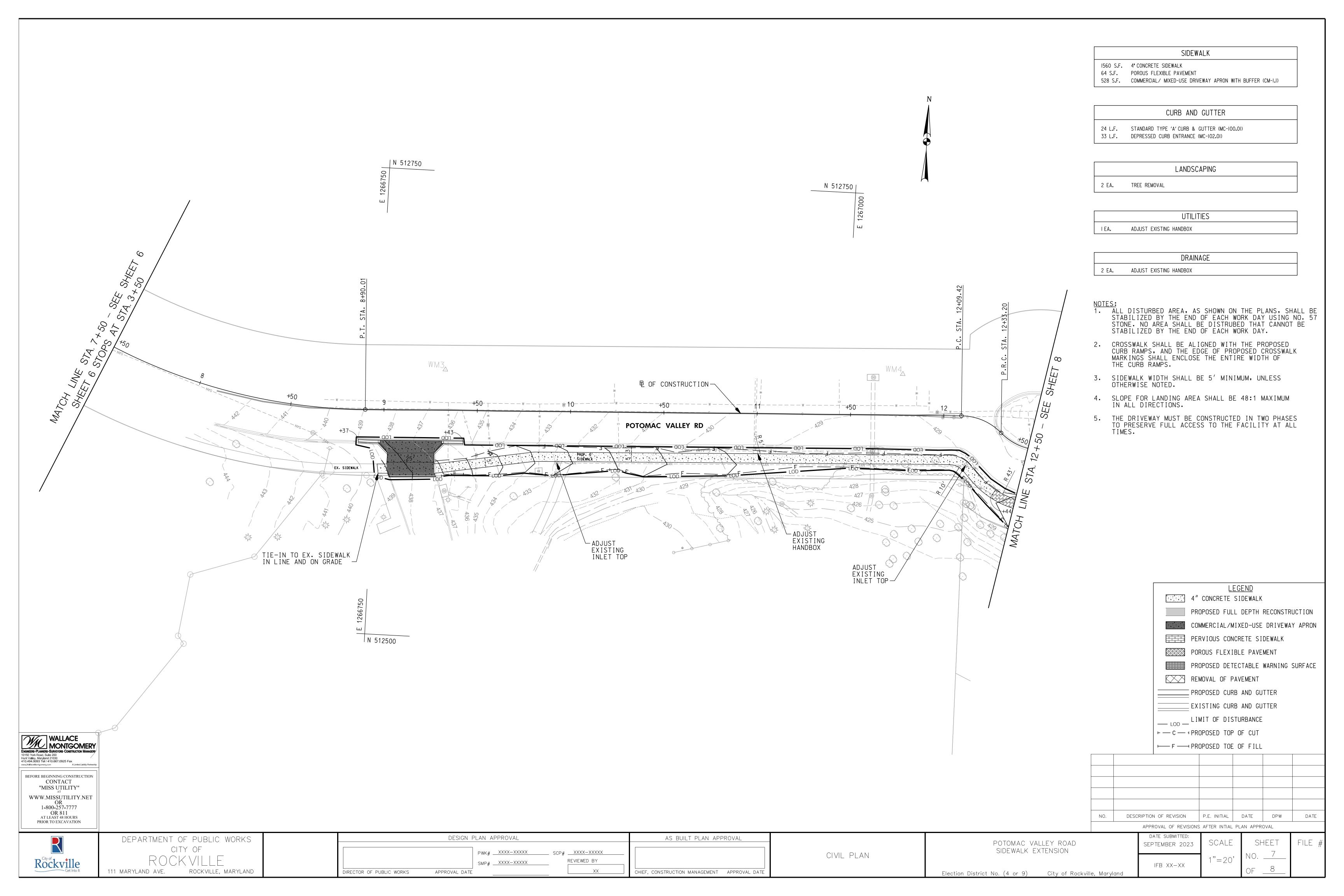
DATE SUBMITTED:
SEPTEMBER 2023

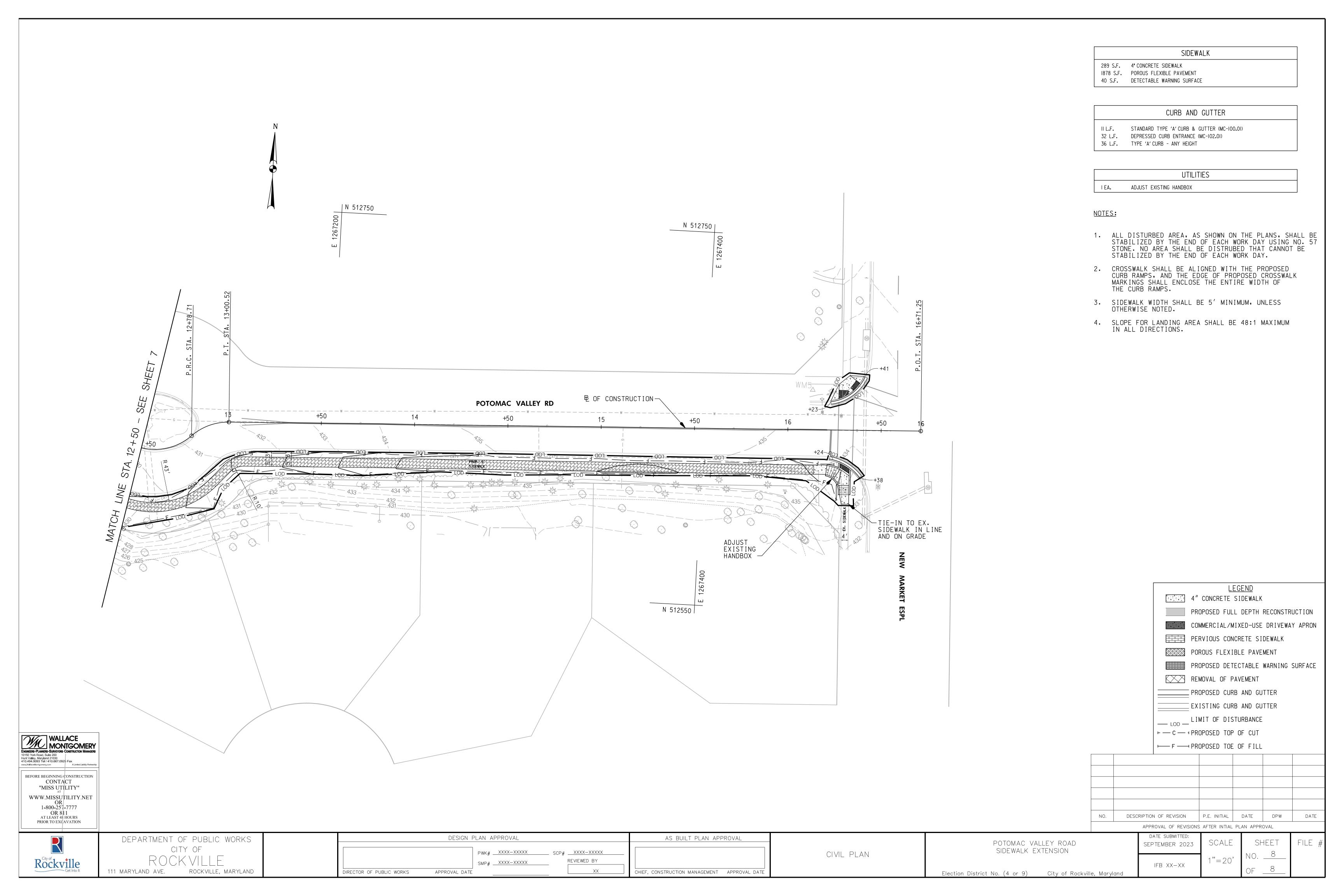
SCALE

1"=50"

NO. _5
OF _8







1.THE PROJECT IS LOCATED IN POTOMAC VALLEY RD, MONTGOMERY COUNTY, LATITUDE IS 39°04'27.0"N, LONGITUDE IS 77°09'35.1"W 2.THE PROJECT IS LOCATED WITHIN THE POTOMAC RIVER MO COUNTY WATERSHED 8-DIGIT #02140202 AND THE CABIN JOHN CREEK WATERSHED 8-DIGIT #02140207. DATA RETRIEVED FROM MONTGOMERY COUNTY GIS DATABASE, CREDIT: MDE, MD iMAP. 3.THE ENTIRE STUDY AREA IS WITHIN PUBLIC RIGHT OF WAY OWNED BY MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION. 4.NO WATER BODIES TRAVERSE THE PROJECT. HOWEVER, THE PROJECT DRAINS TO CABIN JOHN CREEK AND AN UNNAMED TRIBUTARY TO WATTS BRANCH (BOTH USE CLASS 1-P). DATA RETRIEVED FROM MONTGOMERY COUNTY GIS DATABASE, CREDIT: MDE, MD IMAP. 5.THE PROJECT IS NOT LOCATED WITHIN A SPA OR PMA.

6.THERE ARE NO KNOWN PERENNIAL, INTERMITTENT OR EPHEMERAL STREAMS WITHIN 50 FEET OF THE SUBJECT PROPERTY. THERE ARE NO WETLAND OR WETLAND BUFFERS WITHIN THE PROJECT AREA AS EVIDENCED BY THE MONTGOMERY COUNTY GIS DATABASE, CREDIT: MDE, MD IMAP.

7. The project site is not encumbered by a 100 year floodplain. The subject property is located on fema firm map 24031C0333D. DATA RETRIEVED FROM MONTGOMERY COUNTY GIS DATABASE, CREDIT: MDE, MD IMAP.

8. NO RARE, THREATENED, OR ENDANGERED (RTE) SPECIES WERE OBSERVED DURING SITE VISITS BY FLOURA TEETER STAFF. A LETTER REQUESTING CONFIRMATION FROM MARYLAND DEPARTMENT OF NATURAL RESOURCES (DNR) WILDLIFE AND HERITAGE DIVISION HAS BEEN SUBMITTED.

9.NO SLOPES 15% OR STEEPER ARE PRESENT WITHIN THE PROJECT LIMITS.

10.NO CULTURAL OR HISTORIC RESOURCES WERE IDENTIFIED DURING SITE VISITS AND HAS BEEN CONFIRMED THROUGH CONSULTING THE LOCATIONAL ATLAS OF HISTORICAL RESOURCES ON MONTGOMERY COUNTY'S ONLINE DATA PORTAL AND CONFIRMED THAT THERE ARE NO KNOWN CULTURAL OR HISTORICAL RESOURCES LOCATED IN THE STUDY AREA, OR WITHIN 100 FEET THEREOF.

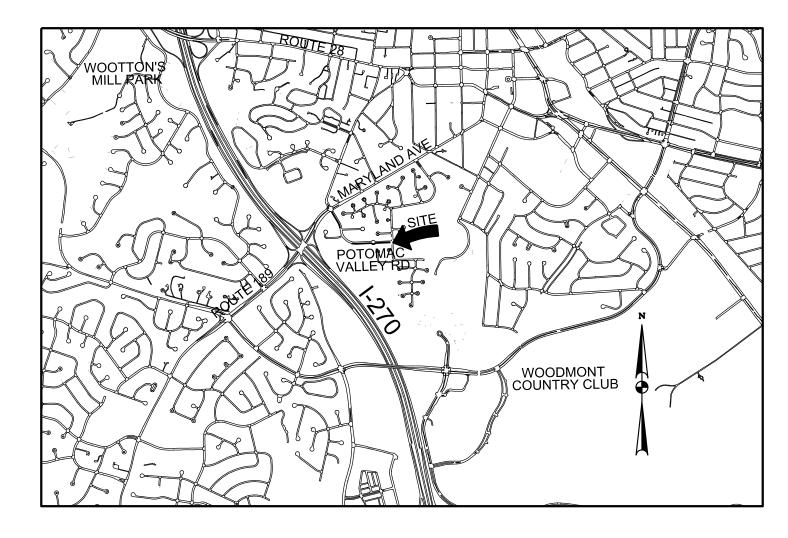
11.INVASIVE SPECIES OBSERVED IN SMALL TO MODERATE AMOUNTS WITHIN THE PROJECT AREA INCLUDE: ENGLISH IVY, PORCELAIN BERRY, POISON IVY.

12.FIELDWORK WAS CONDUCTED BY FLOURA TEETER STAFF JULY 2021 AND AUGUST 2023 WITH OVERSIGHT FROM MEGAN MAFFEO, LIC ENSED LANDSCAPE ARCHITECT. TREE D.B.H. WAS MEASURED USING FORESTRY DIAMETER TAPE.

13.THERE ARE NO FOREST STANDS PRESENT WITHIN THE PROJECT LIMITS OF DISTURBANCE. EXISTING INDIVIDUAL TREES OBSERVED DURING SITE VISITS DID NOT QUALIFY AS A CHAMPION OR 75% SIZE OF CURRENT STATE CHAMPION.

PROPERTY INFORMATION	
THE ENTIRE PROJECT AREA IS WITHIN CITY OF ROCKVILLE RIGHT-OF-WAY	
GROSS TRACT AREA	0.34

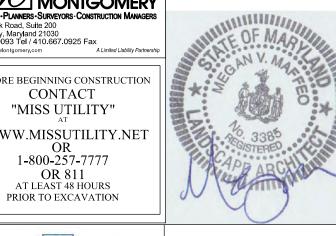
NATURAL RESOURCES INVENTORY / FOREST STAND DELINEATION							
AREA IN FOREST	AREA IN STREAM BUFFER	AREA IN WETLANDS	AREA IN FLOODPLAIN	FORESTED AREA IN STREAM BUFFER	FORESTED AREA IN WETLANDS	FORESTED AREA IN FLOODPLAIN	
N/A	N/A	N/A	N/A	N/A	N/A	N/A	



VICINITY MAP SCALE 1"=2,000'

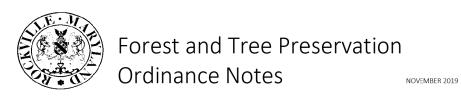


Rockville









SEQUENCE OF EVENTS

The permittee is responsible for strict adherence to the sequence and details as outlined. During each stage of the project, forestry staff may provide additional direction based on site conditions, unforeseen circumstances, or approved revisions

PRE-CONSTRUCTION

- 1. Permittee shall obtain a Forestry Permit (FTP) for the project and secure copies of the approved Forest Conservation Plan (FCP) for distribution to contractors. The Permittee is responsible for obtaining a Maryland Roadside Tree Permit if applicable. Contact Miss Utility at 1-800 257-7777.
- 2. The Permittee must coordinate and schedule an onsite preconstruction meeting with the following attendees: Permittee, Construction Superintendent, Maryland LTE/ISA Certified Arborist (if required by Forestry Department), the City Forestry Inspector, City Project Inspector, and City Sediment Control Inspector. The limits of disturbance must be staked and flagged prior to the preconstruction meeting. No land disturbance shall occur prior to this meeting. This includes, but is not limited to, the installation of tree protection fencing, sediment control measures, clearing, grading and tree stress reduction measures. The limits of disturbance will be reviewed, and tree protection and tree care measures will be discussed.
- 3. No land disturbance shall begin before stress-reduction measures as indicated on the approved FCP, or otherwise directed by the Forestry Inspector have been implemented and approved by Forestry Inspector. Measures not specified on the plan may be required as determined by the Forestry Inspector in consultation with the Permittee's MD LTE/ISA Certified Arborist. Appropriate stress-reduction measures may include, but are not limited to:
- Root pruning b. Crown reduction or pruning
- c. Watering
- d. Fertilizing e. Surface mulching
- . Vertical mulching g. Root aeration matting
- 4. A professional with the dual credentials of Maryland Department of Natural Resources Licensed Tree Expert (LTE) and International Society of Arboriculture Certified Arborist (ISA CA) must perform all stress reduction measures. Documentation of these qualifications may be required. The measures must be done in accordance with ANSI Standards for Tree Care Operations (A300) and other industry best management practices. Implementation of the stress reduction measures must be observed by the Forestry Inspector or written documentation, including photographs must be sent via mail or email to the City

5. Temporary tree protection devices, including signage, shall be installed per the approved Forest Conservation Plan, or as otherwise directed by the Forestry Inspector, and prior to any land disturbance. Tree protection fencing locations must be staked and flagged prior to the pre-construction meeting. The Forestry Inspector, in coordination with the City Sediment $Control\ Inspector, may\ make\ field\ adjustments\ to\ increase\ the\ survivability\ of\ trees\ and\ forest\ shown\ as\ saved\ on\ the\ approved$ $plan. \ The \ Permittee \ must \ contact \ the \ Forestry \ Inspector \ to \ schedule \ a \ follow \ up \ construction \ inspection \ after \ installing \ all \ tree$ protection measures and performing all stress reduction measures. Upon a satisfactory inspection by the Forestry Inspector $and \ Sediment \ Control \ Inspector, \ a \ Notice \ to \ Proceed \ will \ be \ issued \ and \ clearing \ and \ grading \ can \ commence. \ Temporary \ tree$ protection devices may include:

a. Chain link fence (four feet high) b. Super silt fence with wire strung between the support poles (minimum 4 feet high) with high visibility flagging. c. 14 gauge 2 inch x 4 inch welded wire fencing supported by steel T-bar posts (minimum 4 feet high) with high visibility

6. The Permittee and contractor shall maintain the temporary tree protection devices for the duration of the project and the location must not be altered without prior approval of the Forestry Inspector. No equipment, trucks, materials, debris, or any other items may be stored within the tree protection fence areas during the entire construction project. No access beyond the fenced area will be permitted. Tree Protection fencing shall not be removed without prior approval of the Forestry

7. Long term tree protection devices/techniques, as shown on the FCP or as directed by the Forestry Inspector may include but

- are not limited to: Root aeration systems
- b. Retaining walls c. Raised sidewalks
- d. Tunneling of utilitie e. Pier and panel walls f. Porous pavers

DURING CONSTRUCTION

- 1. Periodic inspections at the discretion of the Forestry Inspector will occur during the construction project. Corrections and repairs to all tree protection devices and other protective measures, as determined by the Forestry Inspector, must be made within the timeframe established by the Forestry Inspector.
- 2. The Permittee must immediately notify the Forestry Inspector of any damage to trees, forests, understory, ground cover, and any other undisturbed areas shown on the plan. Remedial actions to the restore these areas will be determined by the Forestry Inspector and the corrective actions must be made within the timeframe established by the Forestry Inspector.
- 3. Failure to comply with the approved FCP or any directive of the City Forester's office is a violation of the Forest and Tree each violation. Each day a violation continues is a separate violation. In addition, a stop work order may be issued until the violation has been abated and the fine has been paid or an appeal has been filed pursuant to Section 10.5-35 of the ETPO. Additional punitive measures as stated under Section 10.5-34 of the FTPO may be imposed.

- 1. After construction is completed, the Permittee must request a final inspection in writing with the Forestry Inspector. At the final inspection, the Forestry Inspector may require additional corrective measures, which may include, but is not limited to
- a. Removal and replacement of dead and dying trees b. Pruning of damaged, dead or declining limbs
- c. Surface mulching d. Soil aeration e. Fertilization
- f. Watering
- h. Clean up of retention areas including trash remova 2. After the final inspection and completion of all corrective measures the Forestry Inspector will request all temporary tree and forest protection devices be removed from the site. Removal of tree protection devices that also operate for erosion and

sediment control must be coordinated with both the City Sediment Control Inspector and the Forest Conservation Inspector. No additional grading, sodding, or burial may take place after the tree protection fencing is removed.

THE FOLLOWING EXEMPTION IS BEING REQUESTED:

 $1. \quad \text{The Permittee is responsible for obtaining the approved Forest Conservation Plan/Landscape Plan and providing a copy to the approved Forest Conservation Plan/Landscape Plan and providing a copy to the providing the providing and providing a copy to the providing the providing and providing a copy to the providing the providing and providing a copy to the providing the providing and providing a copy to the providing the providing and providing a copy to the providing the providing and providing a copy to the providing the providing and providing a copy to the providing a copy to the providing and providing a copy to the providing a copy to the providing and providing a copy to the providing and providing a copy to the copy t$ Landscape Contractor. The Permittee shall ensure that the Landscape Contractor can secure the plants shown the FCP/Landscape Plan. Plant substitutions are not allowed. It is strongly recommended that plant material be secured from supplier by the project start date.

FOREST CONSERVATION EXEMPTION REQUEST

STATE FOREST CONSERVATION TECHNICAL MANUAL SECTION 4.1 STATES LINEAR PROJECTS SUCH AS THIS ARE EXEMPT FROM THE REQUIREMENT TO PREPARE A FOREST CONSERVATION PLAN AS:

NO SPECIMEN TREES, CHAMPION TREES, OR TREES WITHIN 75% OF DBH SIZE OF A STATE RECORDED CHAMPION TREE WILL BE IMPACTED BY CONSTRUCTION OF THIS PROJECT

- 2. A pre-planting meeting is required before installation of landscaping, afforestation, or reforestation. The applicant must schedule an on-site pre-planting meeting with the City Forestry Inspector. Attendees must include the Permittee, landscape contractor, and Forestry Inspector. Trees and shrubs shall conform to the current edition of the American Standard for
- 3. Comply with appropriate City Soil Specification: I. Soil Specification FOR TREE PLANTING WHERE EXISTING PAVEMENT OR OTHER IMPERVIOUS SURFACES WERE PREVIOUSLY LOCATED OR WHERE EXISTING GREENSPACE HAS BEEN SEVERELY DEGRADED¹
 - a. Demolish existing impervious surface and remove all existing asphalt, concrete, stone and construction materials to expose subsoil free of debris.
 - b. Excavate so that final planting bed will provide quality soil to a depth of forty-eight (48) inches, and to a radius of 10' minimum or to new hard edge of planting bed, whichever is less. c. Loosen exposed subsoil below 48" by ripping 18" into the sub grade elevation.
 - d. Test to ensure that planting bed drains at a rate of at least 1 inch/per hour. e. Install imported soil to fill excavated planting bed. Imported soil shall have a texture of LOAM, per the USDA soil classification system and a chemical composition compatible with healthy tree growth. When installing the soil, it should be installed in lifts or layers of < 12 inches (30 cm), tamping or watering (not both) between lifts to minimize potential settling.
 - 2. Immediately prior to installation of plant material, the soil must be tested and must have a pH range between 5.5 and 7 and a nutrient content which corresponds to an adequate rating, per current industry standards. Amend soil, if necessary, to achieve the current industry standard. 3. The Forestry Inspector may require additional soil specifications, based on site conditions.
 - II. Soil Specification FOR PLANTING WHERE EXISTING GREEN SPACE HAS NOT BEEN PROTECTED FROM CONSTRUCTION IMPACTS BUT IS NOT SEVERELY DEGRADED.
 - 1. Site Preparation: a. Remove all construction debris and top four to six inches of existing soil
 - b. Test remaining existing soil to verify a pH range between 5.5 and 7, and has a nutrient content which corresponds to an adequate rating, per current industry standards. c. Apply four (4) inches of mature compost evenly over the entire planting surface. (4" = 12 Cubic Yard/1,000 s.f.). Provide compost supplier information and specifications to the City Forestry Inspector
 - for approval prior to install d. Till the compost into the existing soil to a minimum depth of thirty-six (36) inches using the city's soil
 - profile rebuilding specification. e. If soil does not meet nutrient standards, mitigate soil chemistry to meet the chemical parameters 2. The Forestry Inspector may require additional soil specifications, based on site conditions.
 - III. Soil Specification FOR PLANTING WITHIN EXISTING GREEN SPACE AREAS WHICH HAVE BEEN PROTECTED FROM CONSTRUCTION IMPACTS (One of two options, as determined by Forestry Inspector) Refer to approved City of
 - Rockville Detail A-7 1. Test existing soil to verify it has a pH range between 5.5 and 7, and a nutrient content which corresponds to an adequate rating, per current industry standards. If soil does not meet nutrient standards, one of two options will be performed to mitigate the soil:
 - a. Option 1- Till Method- Depth of tilling for planting must be at least twenty-four (24) inches: i. Apply four (4) inches of mature compost evenly over the entire planting surface (4" = 12 cubic yards/1,000 s.f.). Provide compost supplier information and specifications to the City Forestry
 - Inspector for approval prior to install. ii. Till the compost into the existing soil to a minimum depth of twenty-four (24") inches.
 - b. Option 2 Aeration and Vertical Mulching . Using a 2-3" Auger, drill a series of holes in the soil to a depth of twenty-four (24) inches.
 - ii. Begin at the edge of the hole dug for the root ball and continue drilling at one-foot intervals ${\sf I}$ timum), in concentric rings around the tree out to ten (10) feet from the tree. iii. Each hole must be refilled with mature compost.
 - c. The Forestry Inspector may require additional soil specifications, based on site conditions.

1 See definitions section #9

- IV. Soil testing of the existing soil may be conducted with PRIOR approval from the City's Forestry Inspector to determine the number and location of the samples. The above requirements may be reduced if soil testing
- 1. Soil pH is between 5.5 and 7 2. The top 24" of existing soil contains a minimum of 4-6% organic matter by weight
- The soil is free of contaminants
- 4. The soil texture is sandy loam or loam 5. The soil has an infiltration rate not less than 1" per hour
- 6. The soil does not contain debris or stones greater than one inch
- The soluble salt content is less than 3 dS/m 8. Consult the University of Maryland Extension website: http://extension.umd.edu/ for a listing of commercial soil testing facilities.
- V. Soil preparation is required for street trees planted within the city's rights-of-way and private street trees, if they are part of the approved plan.
- 4. The depths and grades shown on plan drawings are final grades after settlement and shrinkage of the organic material. The contractor shall install the soil mix at a higher level to anticipate this reduction of volume. All grades are assumed to be 'as measured" to be prior to the addition of any surface compost till layer or mulch or sod.
- 5. All details of the planting plans regarding plant quality and proper planting will be discussed including but not limited to: a. Plant quality.
- b. Proper form for species. Proper ratio of caliper size/height to container size/root ball size.
- d. Proper pruning cuts if applicable in accordance with current ANSI A300 pruning standards (generally there should be no recent pruning).
- g. Free of girdling roots, or the ability to remove girdling roots without damaging the tree h. Trees shall be healthy, vigorous, insect/disease free, and without cankers/cracks or trunk damage
- a. Root flare no higher than 3 inches from existing grade. b. Exposed root flare (not graft); removing more than several inches of soil to expose the root flare may result in the rejection of the plant material.
- . Wire baskets/twine/burlap removed from at least the top half of root ball, or as directed by Forestry Inspector. d. All burlap or twine removed completely. . No hose and wire; staking and strapping per City planting detail. Planting Hole a minimum of twice the width of the root ball; could be greater. Planting detail assumes soil has been
- prepared per the city's specifications (Planting, #3). Mulched properly, per City planting detail. h. Wildlife protection installed, if required; type approved by the Forestry Inspector.
- 7. Trees not complying with the above requirements may be rejected at the discretion of the City Forestry Inspector.
- 8. Tree planting will generally not be permitted between the dates of June 1 and September 1, or when the ground is frozen. DEFINITIONS

2. Have a pH between 5.5-7

i. Soil can be considered topsoil if it originates from an A horizon of a natural soil or is a mineral scil with 4-6%% organic matter content, and a NRCS textural class similar to pre-development conditions A horizon soils for the site, or as specified by the City Forestry Division. The city Forestry Division will specify a LOAN texture in the absence of native conditions listed above. Blended soils shall not be used unless specified by the City Forestry Division. In addition, topsoil shall: Be friable and well drained

- 3. Have an organic matter content between 4-6%. 4. Have low salinity as indicated by a soluble salt content which is less than 3 dS/m 5. Be free of debris, stone, gravel, trash, large sticks, heavy metals, and other deleterious
- contaminants, (if screening is used to remove debris, screen size must be ¾ inch or larger) 6. Have a nutrient profile such that it has an adequate rating, per current industry standards.
- 7. Be free of noxious weed seeds
- i. Compost shall be composed of leaves, yard waste, or food waste. Biosolid-based composts shall not be used. A compost sample with analysis shall be submitted for approval to the City Forestry Division before
- ii. Stability refers to the rate of biological breakdown, measured by carbon dioxide release. Maturity refers to completeness of the aerobic composting process and suitability (lack of plant toxicity) as a plant growth media, often measured by ammonia release and by plant growth tests. Compost manufacturers that subscribe to the US Composting Council's testing program may document stability as compost testing 7 or below in accordance with TMECC 05.08-B, "Carbon Dioxide Evolution Rate". Maturity (suitability for plant growth) may be documented as compost testing greater than 80% in accordance with TMECC 05.05-A, "Germination and Vigor". Compost is considered mature and stable if it tests at 6.0 or higher on the Solvita

Compost Maturity Index Rating, which is a combination of Carbon Dioxide and Ammonia Maturity Tests

- (test information and equipment available at www.solvita.com). iii. Compost shall also be: Free of weed seeds.
- 2. Free of heavy metals or other deleterious contaminants. 3. Have a soluble salt content which is less than 3 dS/m

equipment or processes.

i. Soil shall be considered severely degraded if grade was lowered or raised more than 14 inches OR soil was compacted in lifts regardless of the final grade OR was used as a staging area for construction materials,

- 1. The Permittee shall notify the City Forestry Inspector IN WRITING when the planting is complete and request a post planting inspection. The inspection must include the Permittee, landscape contractor and Forestry Inspector. The maintenance and warranty period will not begin until the City Forestry Inspector has accepted ALL plantings.
- 2. Trees will be inspected for plant quality and proper planting in accordance with City specifications and nursery standards. Once the maintenance period has begun, the applicant is responsible for maintaining plant health in accordance with the signed Warranty and Maintenance Agreement.
- 3. Routine inspections will be conducted throughout the warranty period and the applicant will be notified in writing when corrective measures are required. Failure to complete the corrective measures by the given date may result in fines being
- 4. Such maintenance shall include when appropriate, but not necessarily be limited to: a. Weekly watering equal to 10 gallons per caliper measure of tree diameter. (ex: 2.5" caliper tree =25

issued, permits revoked, extension of warranty period or other punitive measures.

gallons/week.) Documented drenching natural rainfall may substitute for weekly watering. b. Control of competing vegetation throughout the maintenance period as necessary.

j. Removal of staking and strapping after six months, or as directed by the Forestry Inspector

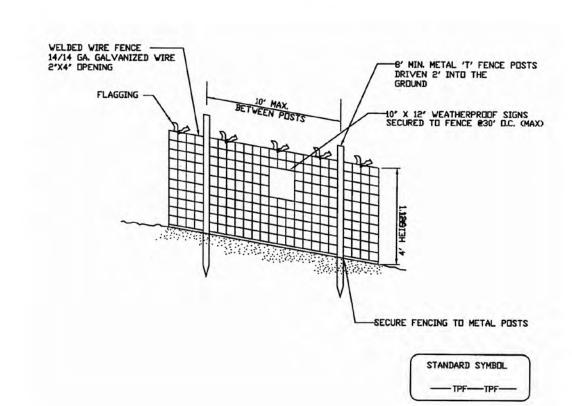
- c. Fertilizing, as required by soil analysis. d. Pruning, mulching, tightening of strapping, resetting of plants to proper grades or upright position.
- e. Furnishing and applying pesticides or other items necessary to thwart damage from insects and disease.
- f. Providing protection measures such as fencing and interpretive signs as necessary, to prevent destruction or degradation of the planting site.
- g. Replacement of dead and dying trees. Survival standards contained in the State Forest Conservation Manual shall be followed for the protection and satisfactory establishment of forest where applicable.

h. Eradicate, suppress and control non-native and invasive plant species during the maintenance period to the satisfaction of the City Forestry Inspector. Installing and maintaining devices to protect against wildlife damage.

NON-NATIVE INVASIVE PLANT CONTROL:

- The City of Rockville maintains a list of non-native and invasive plants for certain available on the City's website. The State of Maryland maintains a noxious weed list. The Permittee shall submit a Non-Native and Invasive Management Plan to the City Forestry Inspector for review and approval prior to the pre-planting meeting, Details to be included in the management
- a. Narrative and/or plan stating the location, type and amount of non-native and invasive plants present on the site.
- b. Proposed treatment measures and methods of control by plant type,
- Timing and frequency of treatments by plant type. d. Plan for seeding and/or re-planting following management/eradication treatment,
- e. Proposed signage type and locations for installing herbicide application notification signs. Copies of contractor certifications/pesticide licenses.
- 2. Contractor is responsible for complying with MDE, EPA and other government agency regulations as well as obtaining proper permits from these agencies as applicable. The Forestry inspector must be notified 48 hours in advance prior to
- 3. The Forestry Inspector will perform periodic inspections of the non-native and invasive treatments throughout the

Tree Protection Fence Detail



NOTES

- Practice may be combined with sediment control
- Location and limits of fencing should be
- coordinated in field with arborist. Boundaries of protection area should be staked
- prior to installing protective device. Root damage should be avoided.
- Protection signage is required. Fencing shall be maintained throughout construction.

T-2 Tulip Poplar 13.5" iriodendon tulipifera T-3 Tulip Poplar 11.5" Liriodendon tulipifera Good T-4 Pignut Hickory 20.5" Carya glabra Good T-5 Pignut Hickory Carva glabra Good T-6 Pignut Hickory Carva glabra T-7 Black Locust 12.5" Good Robinia pseudoacacia T-8 Pignut Hickory Carya glabra T-9 Pignut Hickory Carya glabra Good T-10 Black Cherry runus serotina T-11 White Pine T-12 Black Locust T-13 Black Cherry T-14 Pignut Hickory iriodendon tulipifera T-16 Black Cherry Prunus serotina T-17 Tulip Poplar 10.5" Liriodendon tulipifera T-18 Black Cherry Prunus serotina T-19 Black Cherry Prunus serotina T-20 Black Cherry Prunus serotina T-21 White Pine Pinus strobus T-22 White Pine Pinus strobus T-23 White Pine Pinus strobus T-24 Tulip Poplar T-25 Tulip Poplar Liriodendon tulipifera T-26 White Pine Pinus strobus T-27 White Pine Pinus strobus T-28 White Pine Pinus strobus T-29 White Mulbern Morus alba Some trunk damage at base T-30 White Pine Pinus strobus T-31 White Pine Pinus strobus 19" T-32 White Pine Pinus strobus competing with adjacent bamboo, some wer branch damage T-33 White Pine Competing with adjacent bamboo Pinus strobus T-34 White Pine Competing with adjacent bamboo Pinus strobus T-35 White Pine Pinus strobus T-36 White Pine T-37 White Pine Pinus strobus T-38 Pignut Hickor T-39 Pignut Hickory Carya glabra T-40 Pignut Hickory Carya glabra T-41 Black Cherry Prunus serotina T-42 White Oak Quercus alba Good T-43 Pignut Hickory Carva glabra Good T-44 Tulip Poplar Liriodendon tulipifera Good T-45 Black Locust Robinia pseudoacacia T-46 Black Locust Robinia pseudoacacia Good T-47 Black Locust Multi stem 8" + 11 Robinia pseudoacacia T-48 White Oak Quercus alba T-49 Boxelder T-50 Tulip Poplar Liriodendon tulipifera T-51 Boxelder T-52 American Holly Multi stem 8" + 5" Heavy vine coverage T-53 Boxelder T-54 Upright Red Oak T-55 White Pine T-56 White Pine Pinus strobus T-57 Redbud Cercis canadensis T-58 White Pine Pinus strobus T-59 Dogwood Cornus florida T-60 Redbud Cercis canadensis Trunk damage and significant dieback T-61 Bradford Pear Pyrus calleryana 'Bradford' T-62 Red Maple S-2 Pignut Hickon Carya glabra S-4 Tulip Poplar iriodendon tulipifer S-5 Northern Red Oa S-6 River Birch Multi stem 11" + 12" + 12" + 12" + 11" + 11 S-7 Silver Maple Acer saccharinur

SOILS CHART									
SYMBOL	NAME	SLOPE	K-Factor	HYDROLOGIC	SEEDLING MORTALITY	HIGHLY ERODIBLE	COMMENTS	PRIME AGRICULTURAL	SERPENTINE
2B	Glenelg silt loam	3-8%	0.37	В	Low	No	very deep, well drained soils on uplands	Yes	No
2C	Glenelg silt loam	8-15%	0.37	В	Low	No	very deep, well drained soils on uplands	Yes	No

EXISTING TREE IMPACT CHART CANOPY AREA (SF) SCIENTIFIC NAME CONDITION OTAL AREA OF TREE REMOVAL CANOPY AREA CALCULATED AT A RADIUS OF 1.5' X DBH

EXISTING TREE INVENTORY CHART

T-1 Tulip Poplar

COMMON NAME

SCIENTIFIC NAME

iriodendon tulipifera

DBH

CONDITION

REMARKS

DESCRIPTION OF REVISION P.E. INITIAL DATE DPW

NRI-001

FILE

APPROVAL OF REVISIONS AFTER INTIAL PLAN APPROVAL

DATE SUBMITTED: SHEET POTOMAC VALLEY ROAD AUGUST 2023 SIDEWALK EXTENSION AS SHOWN City of Rockville, Maryland IFB XX-XX

TREES TOTALS 1,995 SF, AS SHOWN IN THE EXISTING TREE IMPACT CHART ON THIS SHEET

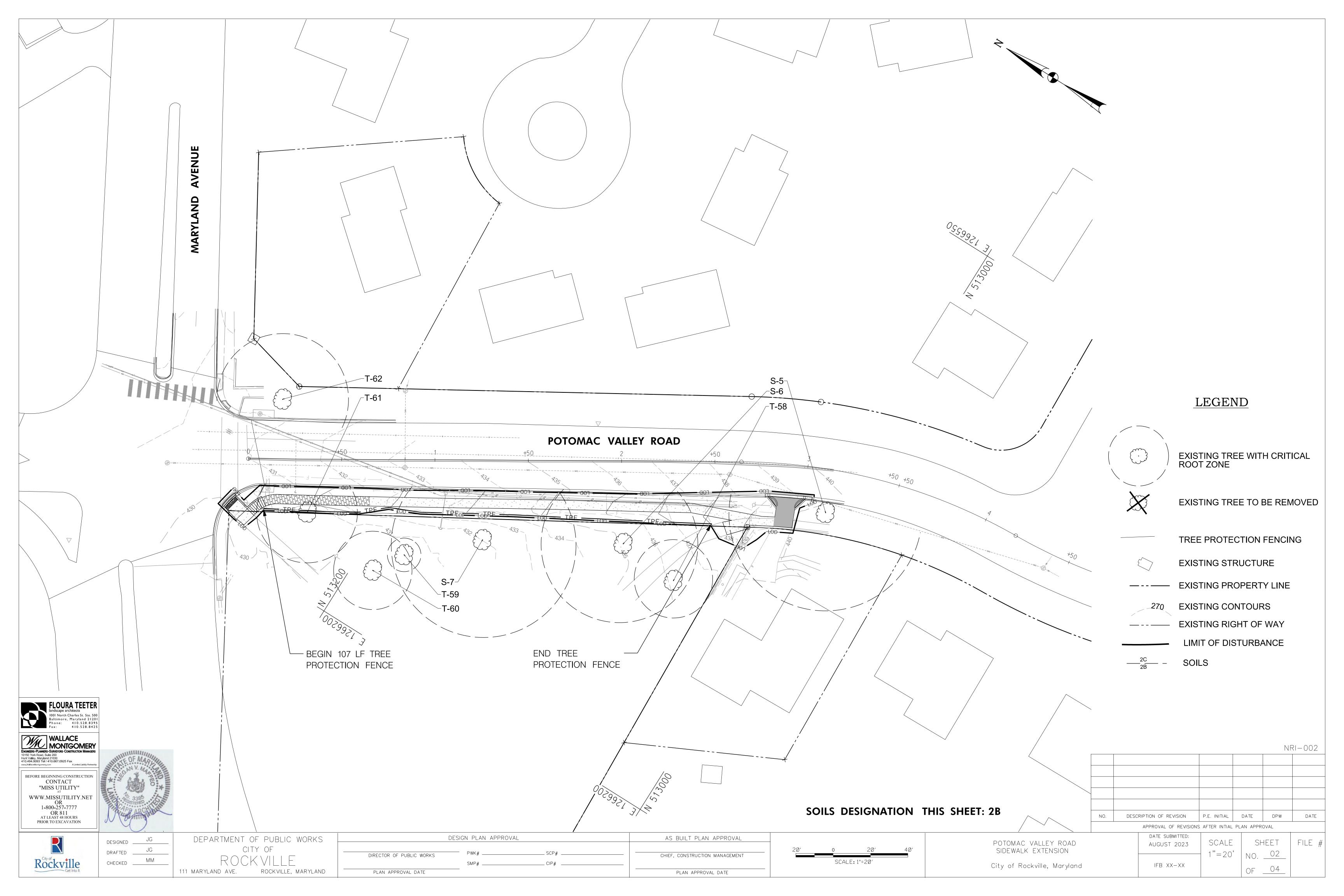
THE PROPOSED DISTURBANCE AREA IS LESS THAN 40 FEET WIDE AND 120,000 SQUARE FEET IN AREA AND NO PRIORITY FOREST OR PRIORITY RETENTION AREAS ARE DISTURBED.

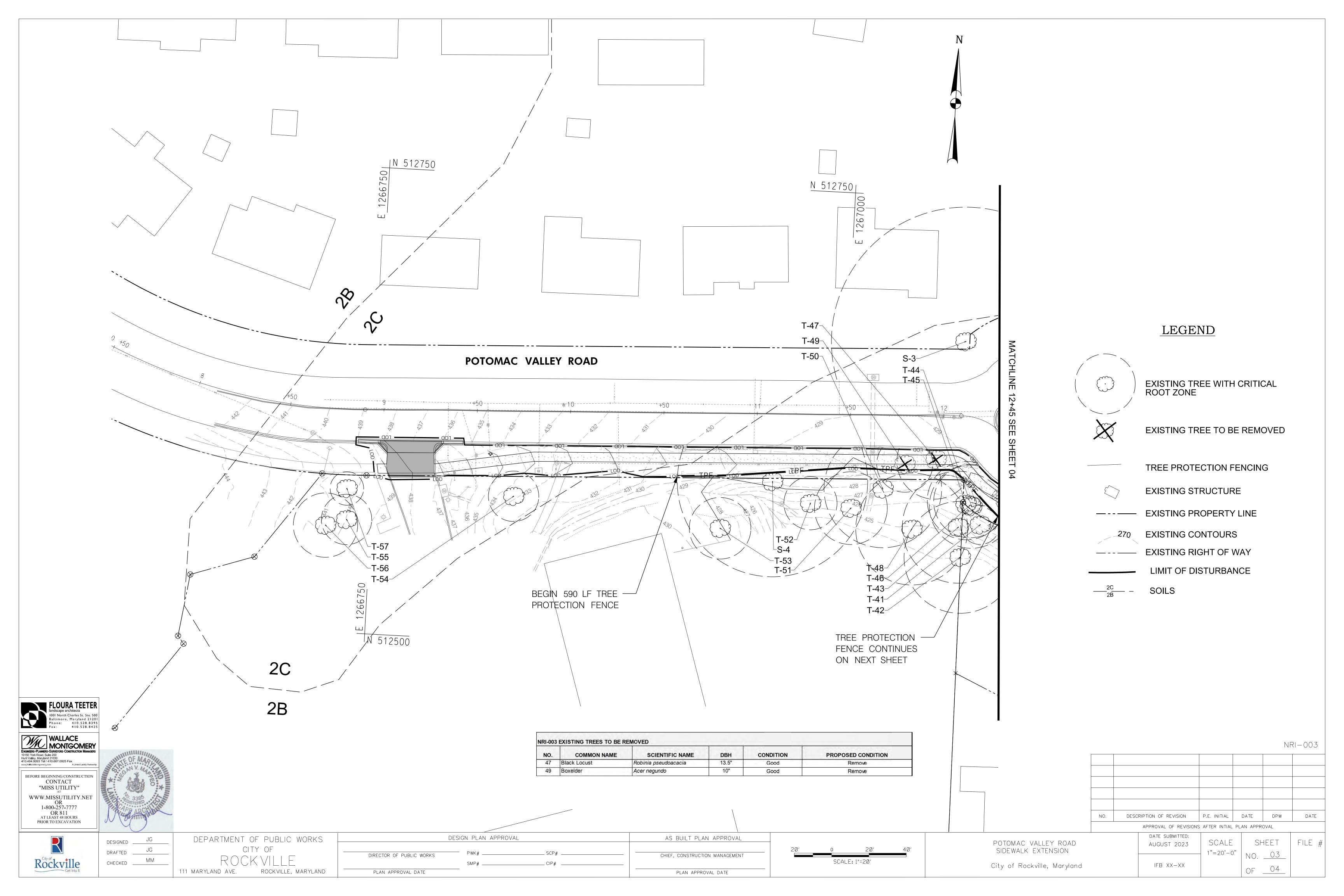
IN ORDER TO CONSTRUCT THE SIDEWALK IMPROVEMENTS, A TOTAL OF 2 INDIVIDUAL TREES HAVE BEEN IDENTIFIED FOR REMOVAL WITHIN THE LIMIT OF DISTURBANCE. THE CALCULATED CANOPY AREA OF IMPACTED

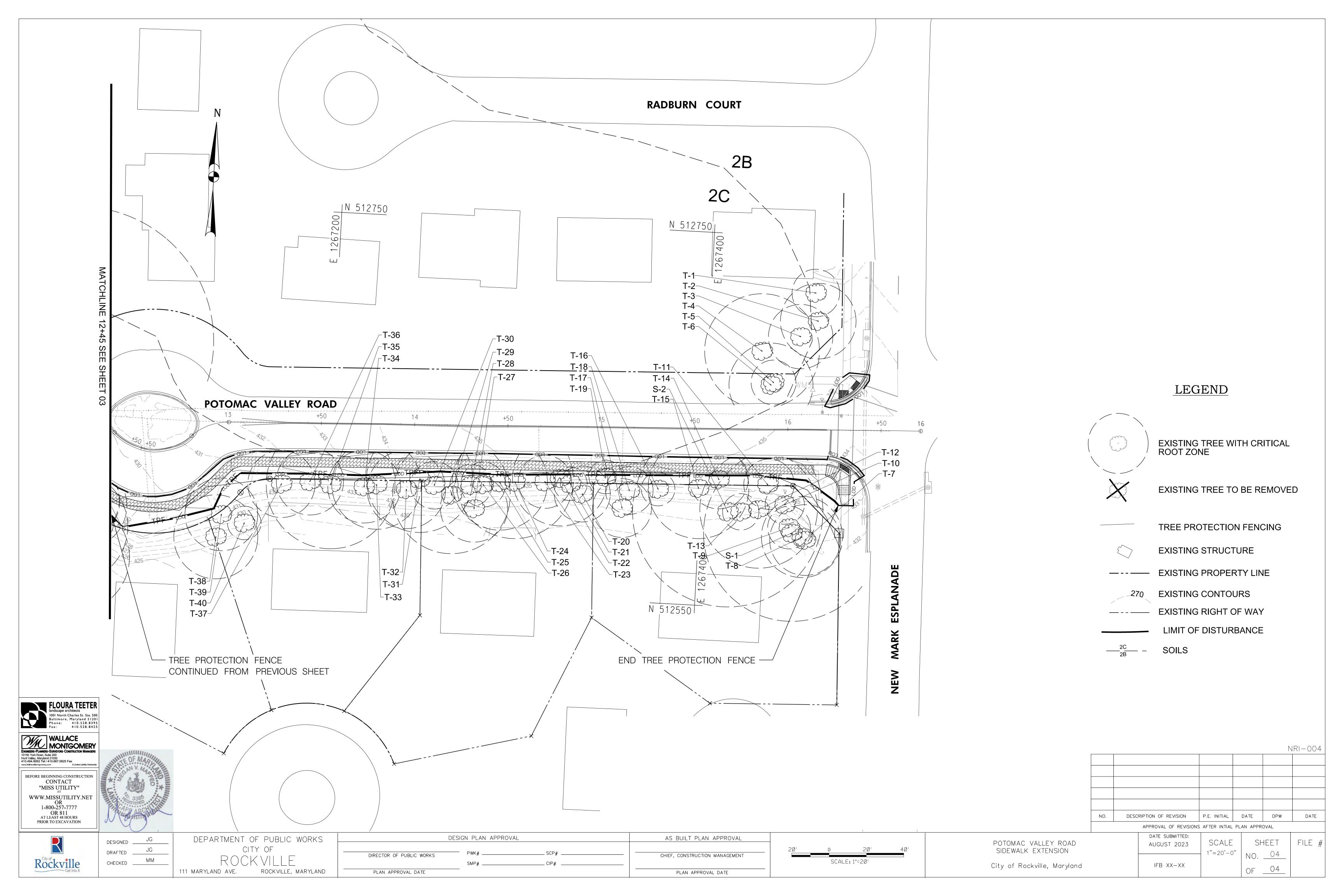


AS BUILT PLAN APPROVAL CHIEF, CONSTRUCTION MANAGEMENT PLAN APPROVAL DATE

DIRECTOR OF PUBLIC WORKS PLAN APPROVAL DATE







POTOMAC VALLEY ROAD SIDEWALK EXTENSION

EROSION AND SEDIMENT CONTROL NOTES November 2016

- 1. The Applicant must obtain inspection and approval by the City of Rockville Department of Public Works (DPW) at the following points:
 - a. At the required preconstruction meetings. b. Following installation of sediment control measures and prior to any other land disturbing
 - c. During the installation of a sediment basin or stormwater management structure at the required inspection points (see Inspection Checklist on plan). Notification prior to commencing construction is mandatory.
 - d. Prior to removal or modification of any sediment control devices. Prior to final acceptance.
- 2. All erosion control measures are to be constructed and maintained in accordance with applicable published standards and specifications and the most current "Maryland Standards and Specifications for Soil Erosion and Sediment Control."
- 3. The Applicant shall construct all erosion and sediment control measures per the approved plan and construction sequence, shall have them inspected and approved by DPW prior to beginning any other land disturbances, shall ensure that all runoff from disturbed areas is directed to the sediment control devices and shall not remove any erosion or sediment control measures without prior permission from DPW.
- 4. Any request for changes to the approved sediment control plan or sequence of construction must be submitted to the DPW Sediment Control Inspector and approved before implementing changes. Major changes will require a plan revision.
- 5. The Applicant shall protect all points of construction ingress and egress to prevent the deposition of materials onto traversed public thoroughfare(s). All materials deposited onto public thoroughfare(s) shall be removed immediately.
- 6. The Applicant shall inspect daily and maintain continuously in effective operating condition all erosion and sediment control measures until such time as they are removed with prior permission from the DPW Sediment Control Inspector.
- 7. All sediment basins, trap embankments, swales, perimeter dikes and permanent slopes steeper or equal to 3:1 shall be stabilized with sod, seed and anchored straw mulch or other approved stabilization measures, within seven calendar days of establishment. All areas disturbed outside of the perimeter sediment control system must be minimized and stabilized immediately. Maintenance must be performed as necessary to ensure continued stabilization. Restabilization or overseeding will be required, if necessary.
- 8. The Applicant shall apply sod, seed and anchored straw mulch, or other approved stabilization measures to all disturbed areas within seven (7) calendar days after stripping and grading activities have ceased on that area. Maintenance shall be performed as necessary to ensure continued stabilization. Other active construction areas that are not being actively graded (i.e. routes for construction vehicles within a site) may be required to be stabilized at the direction of the inspector. Stockpiles, which have not been used for seven (7) calendar days, shall be stabilized through the application of sod, seed, and anchored straw mulch, or other approved stabilization methods.
- 9. Prior to removal of sediment control measures, the Applicant shall stabilize all contributory disturbed areas using sod or an approved permanent seed mixture with required soil amendments and an approved anchored mulch. Wood fiber mulch may only be used in seeding season to promote sheet flow drainage. Areas brought to finished grade during the seeding season shall be permanently stabilized within seven (7) calendar days of establishment. When property is brought to finished grade during the months of November through February, and permanent stabilization is found to be impractical, approved temporary seed and straw anchored mulch shall be applied to disturbed areas. The final permanent stabilization of such property shall be completed prior to the following April 15.
- 10. The site work, materials, approved Sediment Control and Stormwater Management Plans, and any required test reports shall be available, at the site for inspection by duly authorized officials of the
- 11. Surface drainage flows over unstabilized cut and fill slopes shall be controlled by either preventing drainage flows from traversing the slopes or by installing mechanical devices to lower the water downslope without causing erosion. Dikes shall be installed and maintained at the top of cut or fill slopes until the slope and drainage area to it are fully stabilized, at which time they must be removed and final grading done to promote sheet flow drainage. Mechanical devices must be provided at points of concentrated flow where erosion is likely to occur.
- 12. Permanent swales or other points of concentrated water flow shall be stabilized with sod or seed with approved erosion control matting or by other approved stabilization measures.
- 13. Temporary sediment control devices shall be removed, with permission of DPW, within 30 calendar days following establishment of permanent stabilization in all contributory drainage areas. If establishment is not full and uniform as determined by the DPW Sediment Control Inspector, overseeding will be required. Stormwater management structures used temporarily for sediment control shall be converted to the permanent configuration within this time period as well.
- 14. No permanent cut or fill slope with a gradient steeper than 3: l will be permitted in lawn maintenance areas. A slope gradient of up to 2:1 will be permitted in areas that are not to be maintained provided that those areas are indicated on the erosion and sediment control plan with a low-maintenance ground cover specified for permanent stabilization. Slope gradient steeper than 2:1 will not be permitted with vegetative stabilization.
- 15. The Applicant shall install a splash block at the bottom of each downspout unless the downspout is connected by a drain line to an acceptable outlet.
- 16. All water pumped from an excavation during construction shall be pumped either to sediment tanks and/or sediment traps. No water will be pumped to the storm drain system or swale. De-watering shall be performed in accordance with the most current Maryland Standards and Specifications for Soil Erosion and Sediment Control
- 17. For finished grading, the Applicant shall provide adequate gradients so as to: (1) prevent water from standing on the surface of lawns more than 24 hours after the end of a rainfall, except in designated drainage courses and swale flow areas which may drain as long as 48 hours after the end of a rainfall, and (2) provide positive drainage away from all building foundations or openings.
- 18. Sediment traps or basins are not permitted within 20-feet of a building, which exists or is under construction. No building may be constructed within 20-feet of a sediment trap or basin.
- 19. All inlets in non-sump areas shall have asphalt berms installed at the time of base paving to direct
- 20. The DPW Sediment Control Inspector has the option of requiring additional sediment control measures, if deemed necessary.
- 21. All trap elevations are relative to the outlet elevation, which must be on existing undisturbed ground.
- 22. Vegetative stabilization shall be performed in accordance with the most current Maryland Standards and Specifications for Soil Erosion and Sediment Control.
- 23. Temporary sediment trap(s) shall be cleaned out and restored to the original dimensions when sediment has accumulated to a point one-half the depth between the outlet crest and the bottom of
- 24. Sediment removed from traps shall be placed and stabilized in approved areas in such a manner that it does not foul existing or proposed storm drainage systems or areas already stabilized. Sediment shall not be placed within a flood plain or wetland.

25. All sediment basins and traps must be surrounded with a welded wire safety fence. The fence must be at least 42-inches high, have posts spaced no farther apart than eight-feet, have mesh openings no

greater than two-inches in width and four-inches in height with a minimum of 14 gauge wire. Safety fence must be maintained in good condition at all times.

26. Off-site spoil or borrow areas must have approved sediment control plans. Protect all trees to be preserved during construction in accordance with the approved Forest

The Applicant is responsible for all actions of contractor and subcontractors, including repairing damage to sediment control devices and existing infrastructure.

The Applicant shall comply with all provisions of the NPDES Construction Discharge Permit. A copy of the permit and all required reports shall be available on site at all times.

STORMWATER MANAGEMENT STRUCTURE NOTES

- 1. All work and materials for construction shall be in accordance with the latest general specifications and standard details of the Maryland State Highway Administration (MSHA), Montgomery County, Maryland Department of the Environment Stormwater Design Manual and NRCS-MD No. 378 Pond Standards/Specifications.
- 2. Care of Water During Construction All work on permanent structures shall be carried out in areas free from water. The Applicant shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels and stream diversions necessary to protect the areas to be occupied by the permanent work. The Applicant also shall furnish, install, operate and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation and other parts of the work free from water as required or directed by the Department of Public Works (DPW) for constructing each part of the work. After having served its purpose, all temporary protective work shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet and so as not to interfere, in any way, with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the
- The removal of water from the required excavation and/or foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavation and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations, which may require draining the water to sumps from which the water shall be pumped. An exception to this will be made when compacting a filter diaphragm under a stormwater management (SWM) structure barrel; it is acceptable to flood the sand diaphragm with water to enhance compaction.
- 3. Silt and debris shall not be allowed to enter any SWM storage or control structure. Runoff shall not enter structures until the contributing drainage areas have been stabilized. All openings shall be protected with appropriate sediment control measures during construction. Where storm drainpipes convey construction runoff to sediment control traps or basins, the pipes shall be flushed clean at the end of construction prior to the removal of the sediment control trap/basin. Under no circumstances should water be discharged without using proper dewatering procedures.
- 4. All sand used in SWM facilities must be washed silica sand. Limestone sand is unacceptable. 5. All proprietary stormwater management structures and facilities shall be installed and maintained according to manufacturer's recommendations.

- 1. Concrete design shall meet the requirements of ACI 350, Environmental Engineering Concrete Structures, with freezing and thawing exposures. Concrete mix shall use type II or IIA cement, with a 28-day compressive strength of 4500 psi for cast in place and 5000 psi for pre-cast structures. Concrete shall also meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 420 and
- 2. The Applicant shall supply DPW with certified concrete strength results from an independent firm, stamped by a Professional Engineer who is licensed in the State of Maryland.
- 3. Reinforcing steel to be ASTM A615, Grade 60. Epoxy coated reinforcing, when specified, shall conform to ASTM A775. Minimum steel spacing requirement to be in accordance with ACI 350, $A_s = 0.003$ bh at maximum rebar spacing of 12-inches. Minimum concrete cover over steel is 2inches for walls or slabs; 3-inches for base slabs cast against earth or mud mat. Wall thickness and clear distance to reinforcing shall be as shown on the drawings. All bars to be lapped 30 bar diameters unless noted otherwise. Top slab steel shall be lapped over a support wall. Walls greater than 10-inches in thickness shall have reinforcement on both faces.
- 4. Construction joints on structures, including SWM risers and weir walls, shall be located as shown or as directed by DPW. All construction joints shall have a 2-inch x 4-inch keyway with rubber, neoprene or silicon water stop. Bentonite water stops are not acceptable.
- 5. DPW must approve any changes to the SWM riser structure at least 48 hours prior to ordering of the pre-cast structure. If a pre-cast structure is substituted for a designed cast-in-place structure, DPW must be provided new anti-flotation computations, sealed by Professional Engineer who is licensed in the State of Maryland, for the pre-cast structure if the structure has smaller dimensions than the

Corrugated Metal Pipe Used For Stormwater Management Storage

- 1. Corrugated metal pipe shall be aluminized Type 2 corrugated steel pipe. The pipe and its appurtenances shall conform to AASHTO M-36, AASHTO M-274, ASTM A760 and ASTM A929. Pipe over 60-inches shall be 12 gauge with 5-inch x 1-inch corrugations. All pipe 60-inches and less shall be 14 gauge with 2-2/3-inch x 1/2-inch corrugations.
- 2. Aluminized steel pipe that comes in contact with concrete shall be coated with zinc chromate primer.
- 3. Coupling bands, anti-seep collars, end sections, etc., must be composed of the same material as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 millimeters thickness.
- 4. All connections with pipes must be completely watertight. The drainpipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Anti-seep collars and ariser shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight. All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled with an adequate number of corrugations to accommodate the bandwidth. The following type connections are acceptable for pipes less than 24-inches in diameter: flanges on both ends of the pipe, a 12-inch wide standard lap type band with 12-inches wide by 3/8-inches thick closed cell circular neoprene gasket; and a 12-inch wide hugger type band with O-ring gaskets having a minimum diameter of 1/2-inch greater than the corrugation depth. Pipes 24-inches in diameter and larger shall be connected by a 24-inch long annular corrugated band using rods and lugs (two on each side of the lugs). A 12-inch wide by 3/8-inch thick closed cell circular neoprene gasket will be installed on the end of each pipe for a total of 24-inches. Gaskets shall be pre-stressed in accordance with manufacturer's installation specifications.
- 5. Corrugated metal pipe shall be constructed in accordance with MSHA specifications, Sections 303 and 304. Pipe over 60-inches shall have a minimum 2-foot of cover.

All pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy, or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support to a minimum depth of 6-inches below sub-grade.

LOCATION

DESIGN AND QUANTITIES CERTIFICATION

I hereby certify that this plan has been prepared in accordance with the latest Maryland Standards and Specifications for Soil Erosion and Sediment Control and the Ordinance of the Rockville City Code. The estimated total amount of excavation and fill has been computed to be ____410__cubic yards of excavation and _____ 410 ____ cubic yards of fill and the total area to be disturbed as shown on these plans has been determined to be <u>64,025</u> square feet of which 64,025 SF is onsite and 0 SF is in the adjacent right-of-way. The impervious area subject to Stormwater Management shown on this plan is 1<u>.11 acres</u> of which <u>1.11 ac</u> is on—site and <u>0 ac</u> is in the adjacent

Design Engineer Signature Date

OWNER/DEVELOPER CERTIFICATION

I/We hereby certify that any clearing, grading, construction or development, or all of these, will be done pursuant to this plan and that Responsible Personnel involved in the construction project will have a certification of training at a Department of the Environment approved training program for the control of sediment and erosion before beginning the project and the the applicable sediment control conditions and requirements of the City of Rockville and the State of Maryland and its agencies are hereby made part of this plan.

Signature Signature Date Printed Name and Title

STORM DRAIN AND PAVING NOTES December 2022

- 1. All storm drain and paving construction shall be in accordance with the latest General Specifications and Standard Details of the Maryland State Highway Administration, Montgomery County, and the City of Rockville unless otherwise noted.
- 2. <u>Material and Installation Requirements for Storm Drain</u> DPW will accept the following materials for the construction of main line storm drain, except as otherwise specified on the plans:
- A. Reinforced concrete pipe: a. Must be Class IV or V in accordance with the latest versions of ASTM C-76 and ASTM C-443 with rubber-gasketed joints and installed with Montgomery County Standard "C" shaped subgrade bedding or better.
- a. Will be allowed for pipes having a minimum diameter of 15" and a maximum diameter of 36" and as designated on the plan in specific installation locations.
 - b. Must be corrugated polyethylene drainage pipe meeting AASHTO M252 or AASHTO M294; or corrugated polypropylene drainage pipe meeting AASHTO M330; and installed in accordance with ASTM D2321. c. Joints must be watertight according to the requirements of ASTM D3212 with gaskets that meet the requirements of ASTM F477. Gaskets must be installed by the
 - pipe manufacturer and covered with a removable, protective wrap to ensure the gasket is kept free from debris. d. The pipe embedment zone must extend from 6" below the pipe to 12" above the pipe and consist of angular, crushed stone, rock, or gravel with large void content and little to no fines. Embedment zone backfill must meet the Class IA
 - requirements of ASTM D2321 with 100% passing a 1-1/2" screen, less than or equal to 10% passing a #4 screen, and less than 5% passing a #200 screen. i. The pipe embedment zone/trench width must be a minimum of twice the pipe diameter plus 2".
 - ii. Pipe embedment zone material must be placed along the side of the pipe for the full width of the trench in layers not exceeding an uncompacted depth of 6". Compact and consolidate each layer simultaneously on both sides of the pipe. Compact thoroughly under the haunches of the pipe. Continue this method of filling and compacting until the compacted packfill material is least 12 in. above the top of the pipe.
 - iii. The pipe embedment zone must be encapsulated in a geotextile fabric material to protect against the loss of pipe support by preventing the lateral migration of fines from the trench wall into the backfill envelope
 - e. The manufacturer and trade name of the pipe must be specified on the plans; as should all pertinent manufacturer installation requirements, recommendations, and
 - guidelines for that material. f. A third-party inspector must observe and certify that all materials and installation methods comply with these requirements, the City of Rockville Geotechnical Notes,
 - and the approved plans. g. The pipe must be deflection tested within 30 days of the placement of compacted fill to finished grade and/or proof rolling in accordance the City of Rockville Geotechnical Notes. This test must take place in the presence of the City Inspector and utilize a mandrel sized to 95% of the minimum inside diameter. Pipe segments which exceed 5% deflection will be rejected by the City and must be replaced in
- 3. If springheads are encountered in any phase during construction, construction must be stopped until they are capped and piped to a storm drain or stream as directed by the City.
- 4. Provide positive drainage of all areas disturbed by construction. Minimum slope in paved areas is one percent. Minimum slope of graded areas is two percent. Maximum slope on earth banks is 3:1.
- 5. When tying into existing pavement, saw cut existing paving edge to provide a clean, straight, and vertical joint. When removing existing curb or sidewalk, remove to the nearest joint.
- 6. Paving Contractor is responsible for adjusting utility tops to finished grade.
- 7. Applicant is responsible for installing all pavement markings and signage in accordance with the Final Pavement Marking and Signage Plan, which is approved by the Chief of Traffic and Transportation.
- 8. For pavement sections of private driveways and parking lots, refer to Zoning and Planning Ordinance, 25.16.06.d. – Parking Design Standards -Paving Specifications.
- 9. Per Maryland Code Public Utilities Section, all newly installed or replaced storm drain and storm drain facilities must be identifiable, detectable, or locatable. Any new or replacement piping that is buried or installed connecting to the storm drain system, shall be buried or installed with a product or technology that makes the piping detectable or locatable. At a minimum, all pipe must be installed with detectable warning tape.
 - Placement a. Place tape directly over centerline of pipe the full length of trench, 18 to 30 inches below finished surface and with minimal number of splices.
 - b. Overlap tape minimum 6 inches at splices and intersections. Description.
 - a. Size: Six-inch width, minimum 5 mils thickness.
 - b. Printing: Two lines, minimum 3/4-inch-high black lettering on each line, repeated ntinuously along length of tape at intervals no greater than 3 feet.
 - c. Tape color must follow the APWA Uniform Color Code. i. Blue detectable warning tape for water mainline, water service connections, or when water and sewer are installed in same trench. ii. Green detectable warning tape for all sewer, storm drain, and stormwater
 - management lines. 3. Approved Manufacturers.

A. Detectable Warning Tape

- a. Refer to WSSC's Standards and Specifications Section 02315 Part 2.1(A)(2) for an approved manufactures list.
- 10. Where the drop on the main line through a structure can be accommodated by an invert slope of 1.5:1 or flatter, a rounded channel lined with sewer brick on edge shall be built to the crown of the
- 11. Where any part of the storm drain system is located in a fill section, provide fill material in accordance with the Geotechnical Notes compacted to 95% AASHTO T-99 density from approved subgrade to the structure bottom slabs and/or the pipe bedding.

GENERAL NOTES November 2016

- 1. The Applicant is the entity for which the City of Rockville Department of Public Works (DPW) has issued a permit. For DPW projects where a permit is not applicable, the entity for which the City contract is issued shall be considered the Applicant in these notes. The Applicant is responsible for all contractors, agents, subcontractors, or other entities completing work under this permit and/or
- 2. The Applicant must arrange a pre-construction meeting prior to commencing any work. Provide at least 48 hours of notice to the following: City Project Inspector listed in the permit, City Forestry Inspector at 240-314-8713, if required by either a DPW and/or Forestry permit, or DPW Sediment Control Inspector at 240-314-8879, if required by permit.
- 3. The Applicant must contact Miss Utility at 1-800-257-7777 or #811 or missutility.net so that utilities are marked prior to holding any pre-construction meeting.
- 4. Information concerning existing underground utilities was obtained from available records. The Contractor must determine the exact location and elevation of existing utilities by digging test pits at the utility crossings well in advance of trenching. If clearance is less than shown on this plan, contact the Professional Engineer who stamped the design plans before proceeding with construction.
- 5. Maintain a minimum one-foot vertical clearance between all City utilities crossing any other utility. Unless otherwise noted, maintain a five-foot horizontal clearance with between a City utility with any other utility or structure. The only exception is that there shall be a ten-foot horizontal clearance between City water and sewer mains.
- 6. At the end of each day, all trenches shall be backfilled, all equipment secured, and the area left in a safe condition. Steel plates are allowed to remain no longer than seven days. Plates are to be notched (recessed) and pinned to the roadway. Plates must be large enough to allow a minimum of one-foot bearing on all four sides of the pavement surrounding the excavation. The steel plate requirements
- 7. The public road utility patch shall be in accordance with City Standard Detail #60, or as shown on the plans. All trenches in public streets shall be filled with compacted Graded Aggregate Base (GAB) from below the pavement to the top of the pipe embedment zone or to a depth of five-feet,
- 8. DPW normal working hours are Monday through Friday, except holidays, from 7 a.m. to 5 p.m. The City observes the following holidays: New Year's Day, Martin Luther King's Birthday, President's Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, Thanksgiving Friday, and Christmas Day, and all days of general and congressional elections throughout the State. The Contractor will not be permitted to close lanes or do any work that requires the services of the City forces, outside of the normal working hours, unless listed in the permit or authorized by DPW in writing. However, the Contractor, with verbal permission of DPW may be permitted to work outside of the normal work hours for clean-up activities or other such items that do not adversely impact traffic, residents or City services.
- 9. Traffic must be maintained on all roadways within the construction area as directed by DPW. No lane closure shall be permitted between 7:00-9:00 A.M. or 3:30-6:00 P.M. Monday through Friday. An exception is that lane closures are permitted on secondary residential streets at any time during normal working hours. Deployment and design of all traffic control devices shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devises (MUTCD). If required, traffic control plans shall be reviewed and approved by the Chief of the Traffic and Transportation Division. DPW may suspend lane closure or other traffic controls at any time during, or in advance
- 10. Sheeting and shoring is the total responsibility of the Applicant. A Professional Engineer licensed in the State of Maryland shall seal these drawings. Provide three copies to DPW for informational proposes only.
- 11. In addition to all City permits, the Applicant is responsible to ensure that all necessary Federal, State and/or Montgomery County approvals and/or permits have been obtained in association with this
- 12. Shop drawings must be prepared and sealed by a Professional Engineer licensed in the State of Maryland prior to fabrication. The Professional Engineer who sealed the design plans (but not the shop drawings) must approve the shop drawings for conformance to the approved design. Provide three copies of approved shop drawings to DPW prior to construction. Standard pre-cast structures previously approved by the Maryland State Highway Administration, Montgomery County and Washington Suburban Sanitation Commission do not require a shop drawing submission. Use actual field soils data for design of pipes and structures. All pipes and structures in paved areas shall be designed for HS-20 vehicle loading.
- 13. Upon completion of construction, the Applicant shall provide three sets of red lined As-Built prints signatures and Professional Engineer's seal and signature (a scanned image of the original mylar is acceptable). The As-Built shall be sealed by a Professional Engineer or Professional Surveyor, as appropriate and must be licensed by the State of Maryland. The seal shall note that it is only for the As-Built and shall include an as-built certification acceptable to DPW. Upon receipt of written approval, the Applicant shall provide approved As-Built mylar drawings along with the original mylars (with all original signatures) to DPW prior to the release of the permit.
- 14. The Applicant must comply with the Montgomery County Noise Control Ordinance. Please refer to the Montgomery County Department of Environmental Protection at 240-777-7770 askdep@montgomerycountymd.gov, or www.montgomerycountymd.gov/DEP.

RELATED REQUIRED PERMITS To be completed by the consultant and placed on the first sheet of the Sediment Control / Stormwater Management plan set for all projects

IT IS THE RESPONSIBILITY OF PERMITEE/OWNER OF THIS SITE TO OBTAIN ALL

REQUIRED PERMITS PRIOR TO ISSUANCE OF THE APPROVED SEDIMENT CONTROL

PERMIT

			- EIXIIII		
TYPE OF PERMIT	REQD	NOT REQD	PERMIT#	EXPIRATION DATE	WORK RESTRICTION DATES
MCDPS Floodplain District		X			
WATERWAYS/WETALND(S):		X			
a. Corps of Engineers		X			
b. MDE		X			
b. MDE Water Quality Certification		X			
MDE Dam Safety		X		<u> </u>	
COR Public Works		X			
COR Stormwater Managemement	X				
COR Sediment Control	X				
N.P.D.E.S Notice of	V		WWW.		DATE FILED
INTENT	X		XXXXXX	!	TBD
FEMA LOMR (Required Post Construction)		X			
OTHERS (Please List):		X			
Forest Conservation Amendment	X			APPROVAL DATE	

	June 2017				
NO.	DESCRIPTION OF REVISION	P.E. INITIAL	DATE	DPW	DATE
	APPROVAL OF REVISIONS	AFTER INTIAL	PLAN APPR	OVAL	

CITY OF ROCKVILLE AS-BUILT REQUIREMENTS:

ALL ENTITIES WHO CONSTRUCT PUBLIC WATER OR SEWER LINES, STORM DRAINAGE SYSTEMS, BIKE PATHS, SIDEWALKS OR STREETS TO BE MAINTAINED BY THE CITY OF ROCKVILLE MUST SUBMIT AN "AS-BUILT" SET OF CONSTRUCTION DRAWINGS FOR APPROVAL AS A PART OF THE CITY'S ACCEPTANCE PROCESS. ADDITIONALLY, ENTITIES CONSTRUCTING ANY STORMWATER MANAGEMENT OR STREAM RESTORATION FACILITIES MUST SUBMIT AN "AS-BUILT" SET OF CONSTRUCTION DRAWINGS. THE INITIAL SUBMITTAL SHALL BE THREE (3) SETS OF "RED-LINED" MARKED UP PRINTS, WHICH SHOULD BE DELIVERED TO THE DEPARTMENT OF PUBLIC WORKS COUNTER AT CITY HALL (ATTN: DON JACKSON, ENGINEERING TECHNICIAN). THIS SUBMITTAL SHALL INCLUDE RECORDED COPIES OF ANY PUBLIC EASEMENTS REQUIRED WITH THE PROJECT.

2. THE AS-BUILT DRAWINGS SHALL CLEARLY SHOW ANY CHANGES OR VARIATIONS FROM THE APPROVED DESIGN. HORIZONTAL VARIATIONS GREATER THAT 1.0 FOOT SHOULD BE SHOWN DIMENSIONALLY OR THROUGH PLUS STATIONS. HORIZONTAL VARIATIONS GREATER THAN 10.0 FEET SHOULD ALSO SHOW THE GRAPHIC RELOCATION OF THE OBJECT. VERTICAL ELEVATION VARIATIONS GREATER THAN 0.1FEET SHALL BE PROVIDED FOR ALL SHOWN DESIGN ELEVATIONS. A BENCHMARK ELEVATION AND BENCHMARK DESCRIPTION AND LOCATION SHALL ALSO BE PROVIDED ON EACH PLAN SHEET.

- 3. AS-BUILT PLANS FOR A SURFACE SWM FACILITY SHALL INCLUDE THE FOLLOWING ADDITIONAL INFORMATION.
- a) LENGTH, WIDTH, SLOPE INFORMATION AND DEPTH OR CONTOURS (1 FOOT INTERVALS) OF THE POND AREA ALONG WITH A VERIFICATION OF THE ORIGINAL DESIGN VOLUME.
- b) A BENCHMARK ON THE RISER, INLET HEADWALL, OR OTHER APPROVED LOCATION.
- c) REVISED DESIGN COMPUTATIONS VERIFYING THE FUNCTIONALITY OF THE POND. COMPUTATIONS SHALL BE SUBMITTED DIRECTLY TO THE DPW PROJECT ENGINEER, ALONG WITH AN ADDITIONAL PAPER COPY OF THE AS-BUILT PLANS.
- d) THE GRADING/STORAGE VOLUMES MUST BE APPROVED BY DPW PRIOR TO LANDSCAPING/PLANTING. ALL PLANTINGS MUST BE ADDED TO THE AS-BUILT PLANS AFTER PLANT INSTALLATION. AS-BUILT PLANS WILL NOT BE APPROVED WITHOUT REQUIRED PLANTINGS.

NOTE: AS-BUILT DATA, WHICH SHOWS THAT THE CONSTRUCTED FACILITY VARIES FROM THE ORIGINAL DESIGN STORAGE ELEVATIONS BY GREATER THAN OR EQUAL TO 10%, WILL HAVE TO BE CORRECTED (REGRADED) PRIOR TO SUBMISSION FOR REVIEW UNLESS STORAGE IS VERIFIED. ALL CONSTRUCTED FEATURES NOT PREVIOUSLY APPROVED ON THE ORIGINAL CONSTRUCTION DRAWINGS MAY HAVE TO BE MODIFIED AT THE CITY'S DISCRETION.

- 4. ALL AS-BUILT INFORMATION SHALL BE BLOCKED IN AND SHOWN ON THE ORIGINAL CONSTRUCTION DRAWINGS AND SHALL BE BLOCKED IN AS THUS 386.25
- 5. THE AS-BUILT CERTIFICATE (SHOWN ON THE FOLLOWING PAGE) SHALL BE SIGNED AND SEALED BY A MD PROFESSIONAL ENGINEER OR A MD PROFESSIONAL LAND SURVEYOR AND SHALL APPEAR ON THE COVER SHEET OF THE AS-BUILT I hereby certify that these documents PLAN SET. ALL SHEETS INCLUDED IN THE PERMIT SET MUST BE SUBMITTED IN THE FINAL AS-BUILT SET.

6. THE CITY'S INSPECTOR AND PROJECT ENGINEER WILL REVIEW THE AS-BUILT INFORMATION. THE DESIGN ENGINEER WILL BE NOTIFIED TO SUBMIT MYLARS FOR AS-BUILT APPROVAL ONCE ALL CHANGES HAVE BEEN SATISFACTORILY SHOWN. THE AS-BUILT INFORMATION SHALL PREFERABLY BE SHOWN ON THE ORIGINAL CONSTRUCTION DRAWINGS (I.E., THE ORIGINAL MYLARS WITH THE PERMIT APPROVAL STAMP AND ORIGINAL P.E. SEAL). PLACING AS-BUILT INFORMATION UPON A SCANNED IMAGE OR OTHER REPRODUCTION OF THE ORIGINAL CONSTRUCTION DRAWINGS IS ACCEPTABLE SO LONG AS THE QUALITY, INTEGRITY, AND LEGIBILITY OF THE ORIGINAL DRAWINGS ARE SUBSTANTIALLY PRESERVED WITHOUT UNDUE COMPROMISE. AS-BUILT DRAWINGS WILL BE SCANNED BY THE CITY FOR ARCHIVING, SO BOTH THE AS-BUILT AND ORIGINAL INFORMATION MUST BE SUFFICIENTLY DISCERNIBLE. THE AS BUILT PLAN SET SHALL BE SUBMITTED TO DEPARTMENT OF PUBLIC WORKS ENGINEERING DIVISION (ATTN: DON JACKSON, ENGINEERING TECHNICIAN) FOR SIGNATURE AND SHALL CONTAIN THE SAME RED-LINED INFORMATION AS APPROVED IN THE AS-BUILT REVIEW. NO PAPER PRINTS, PAPER OR MYLAR SEPIAS WILL BE ACCEPTED

PROFESSIONAL CERTIFICATION: were prepared or approved by me, and that I am a duly licensed Professional Engineer under the laws of the State of Maryland, License No. <u>31168</u>, Expiration Date: <u>1/12/2025</u> JASON AZAR

NAME DESIGN PLAN APPROVAL AS BUILT PLAN APPROVAL POTOMAC VALLEY ROAD **EROSION & SEDIMENT** SIDEWALK EXTENSION PWK# <u>2023-00014</u> CONTROL PLAN REVIEWED BY



BEFORE BEGINNING CONSTRUCTION CONTACT "MISS UTILITY" WWW.MISSUTILITY.NET OR 1-800-257-7777 OR 811 AT LEAST 48 HOURS PRIOR TO EXCAVATION

unt Valley, Maryland 21030 10.494.9093 Tel / 410.667.0925 Fax

DEPARTMENT OF PUBLIC WORKS Rockville 111 MARYLAND AVE.

ROCKVILLE, MARYLAND

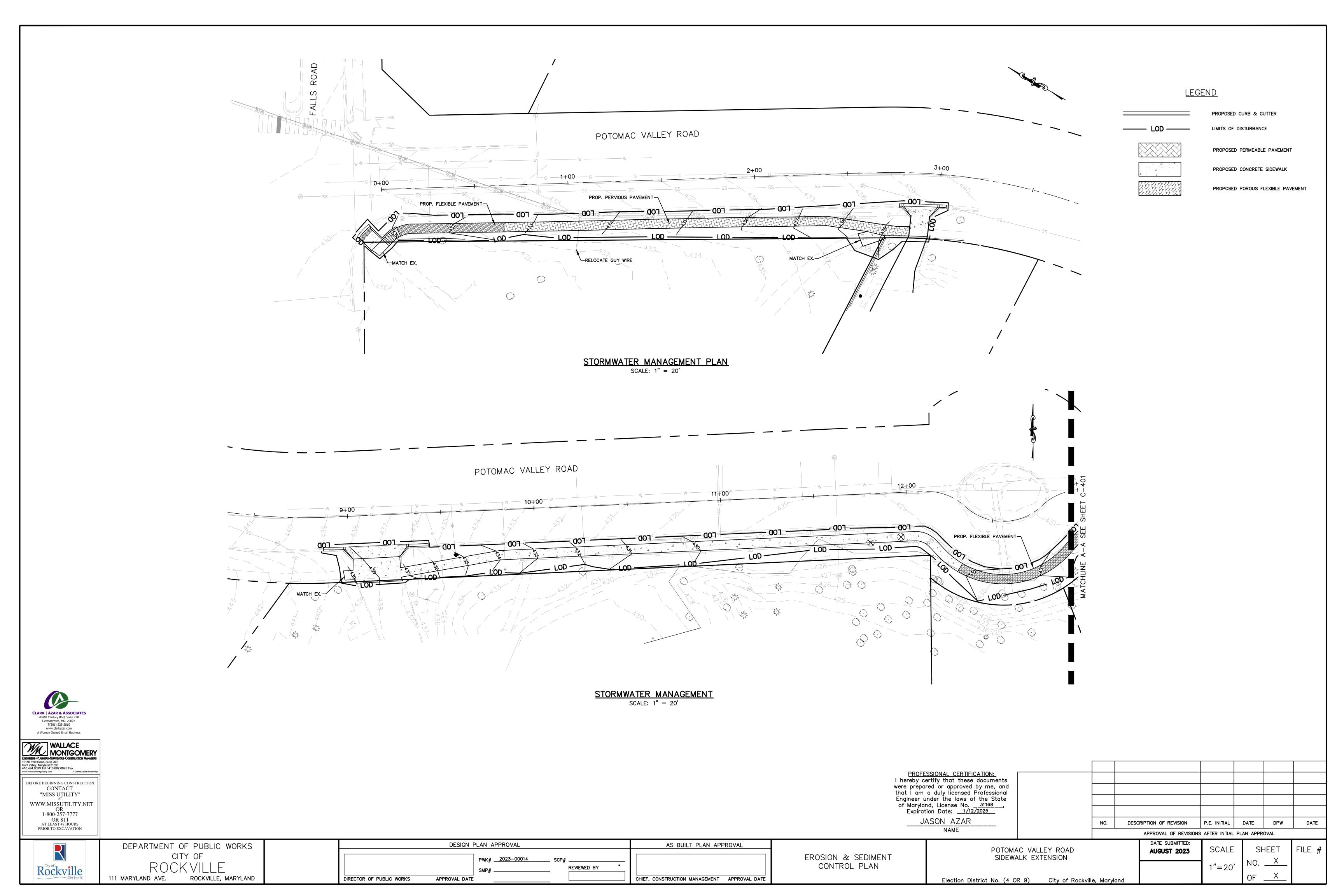
DIRECTOR OF PUBLIC WORKS

APPROVAL DATE

CHIEF, CONSTRUCTION MANAGEMENT APPROVAL DATE

Election District No. (4 OR 9) City of Rockville, Maryland

SHEET AUGUST 2023 1"=20'



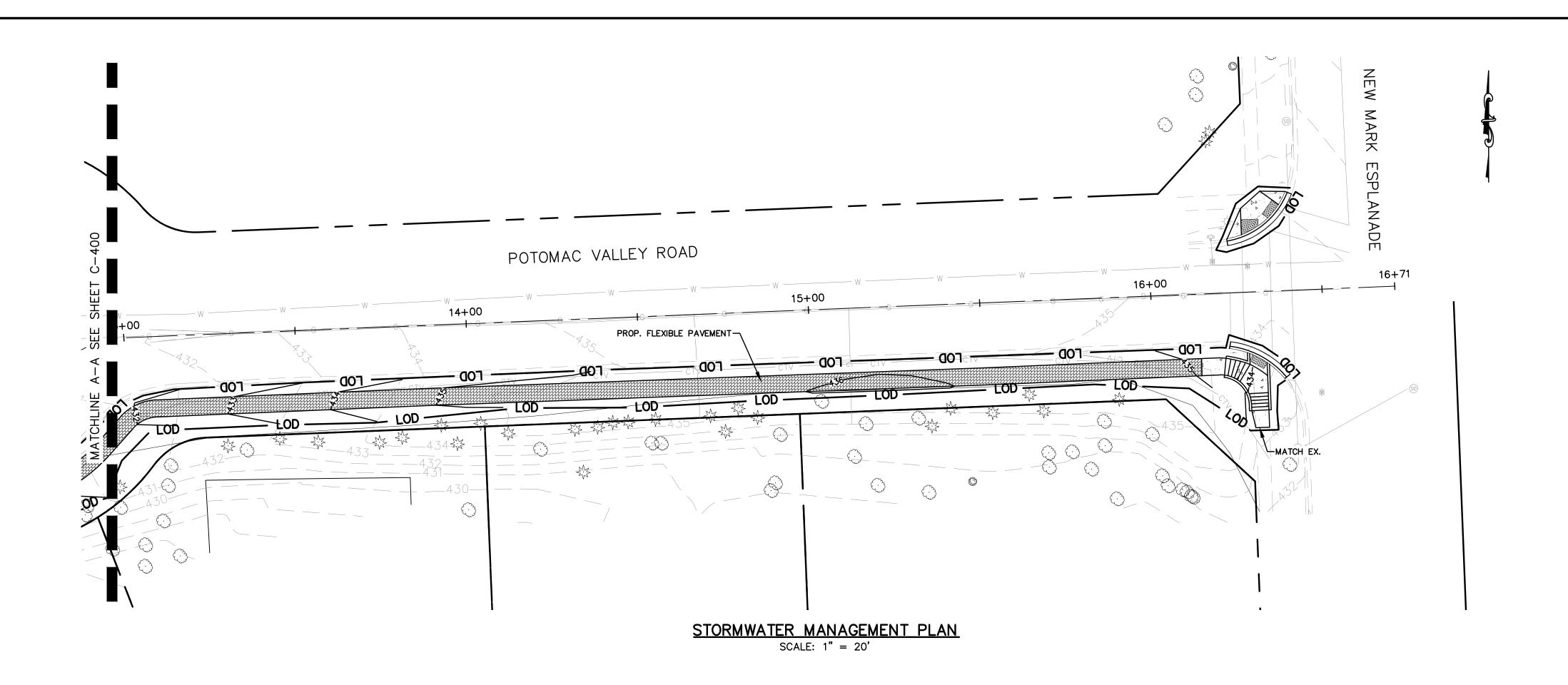
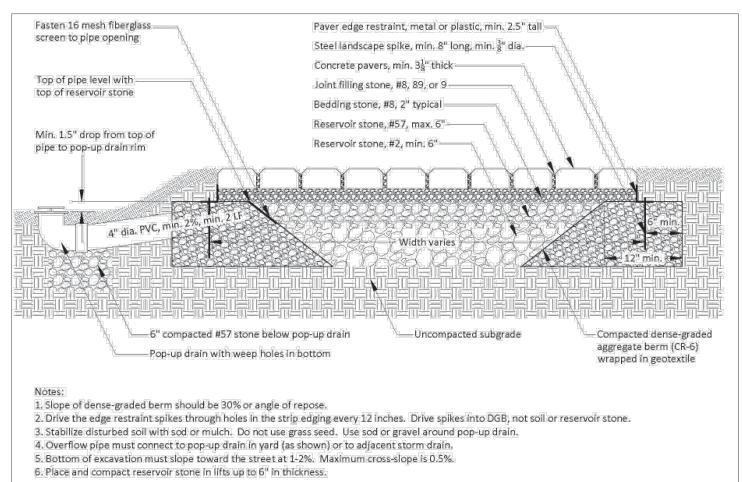


Figure 5. Cross-section at downslope end of driveway
Permeable driveway with strip edge restraint in dense-graded berm (DGB) and piped overflow







NAME

NO.	DESCRIPTION OF REVISION	P.E. INITIAL	DATE	DPW	DATE
	APPROVAL OF REVISIONS	AFTER INTIAL	PLAN APPRO	OVAL	

Rockville	

DEPARTMENT OF PUBLIC WORKS
CITY OF
ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGN PLAN APPROVAL	AS BUILT PLAN APPROVAL		
PWK# 2023-00014 SCP# SMP#	CHIEF, CONSTRUCTION MANAGEMENT APPROVAL DATE		

STORMWATER MANAGEMENT PLAN POTOMAC VALLEY ROAD SIDEWALK EXTENSION

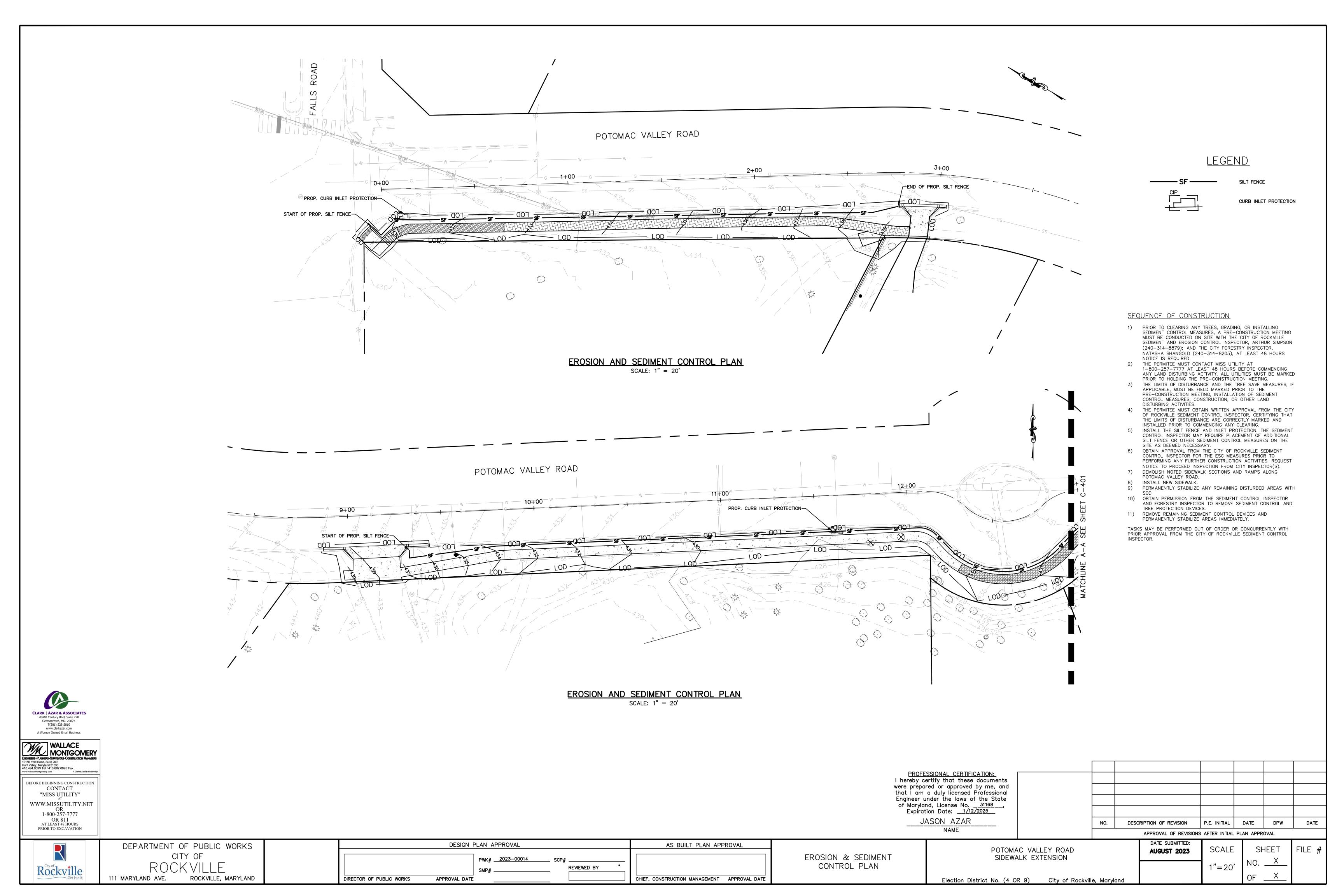
Election District No. (4 OR 9) City of Rockville, Maryland

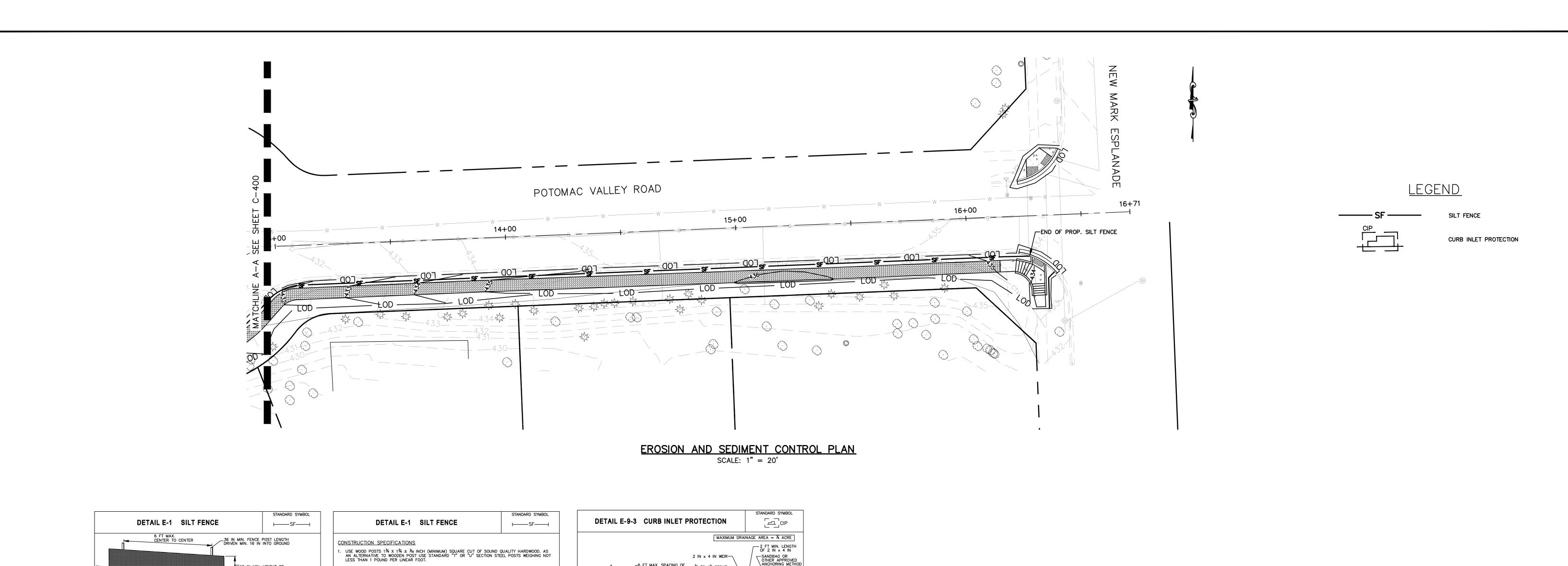
AUGUST 2023

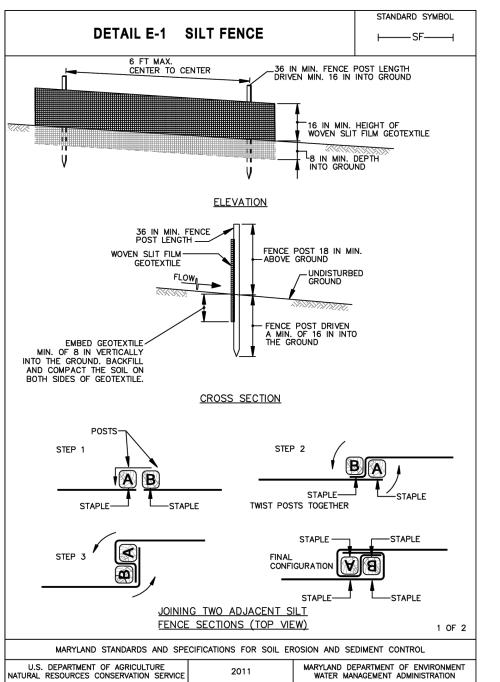
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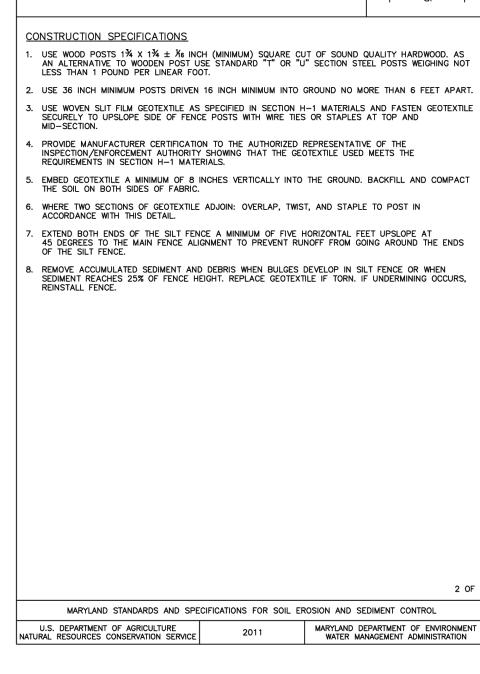
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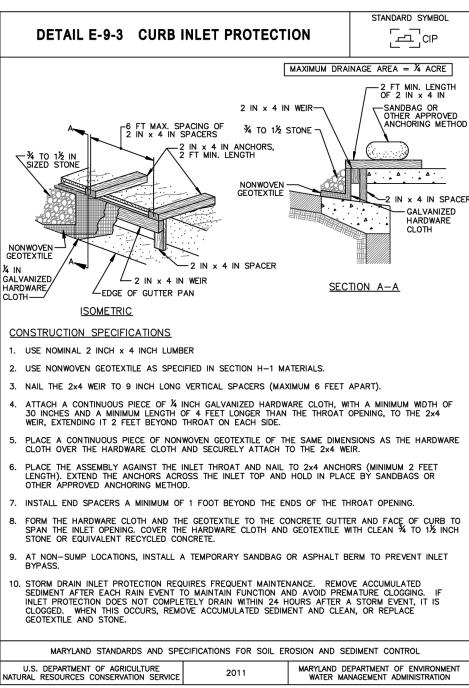
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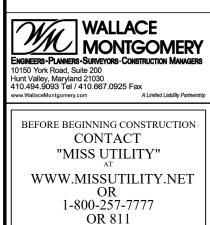












AT LEAST 48 HOURS PRIOR TO EXCAVATION

Rockville

DEPARTMENT OF PUBLIC WORKS

111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGN PLAN APPROVAL AS BUILT PLAN APPROVAL PWK# <u>2023-00014</u> REVIEWED BY DIRECTOR OF PUBLIC WORKS APPROVAL DATE CHIEF, CONSTRUCTION MANAGEMENT APPROVAL DATE

EROSION & SEDIMENT CONTROL PLAN

POTOMAC VALLEY ROAD SIDEWALK EXTENSION

Election District No. (4 OR 9) City of Rockville, Maryland

PROFESSIONAL CERTIFICATION: I hereby certify that these documents

were prepared or approved by me, and

that I am a duly licensed Professional

Engineer under the laws of the State

of Maryland, License No. <u>31168</u>,

Expiration Date: <u>1/12/2025</u>

NAME

___JASON_AZAR

DATE SUBMITTED: AUGUST 2023 1"=20'

P.E. INITIAL

DATE

DESCRIPTION OF REVISION

APPROVAL OF REVISIONS AFTER INTIAL PLAN APPROVAL SHEET NO. __X

STANDARD EROSION AND SEDIMENT CONTROL NOTES

- THE PERMITTEE SHALL NOTIFY THE DEPARTMENT OF PERMITTING SERVICES (DPS) FORTY-EIGHT (48) HOURS BEFORE COMMENCING ANY LAND DISTURBING ACTIVITY AND, UNLESS WAIVED BY THE DEPARTMENT, SHALL BE REQUIRED TO HOLD A PRE-CONSTRUCTION MEETING BETWEEN THEM OR THEIR REPRESENTATIVE, THEIR ENGINEER AND AN AUTHORIZED REPRESENTATIVE OF THE
- 2. THE PERMITTEE MUST OBTAIN INSPECTION AND APPROVAL BY DPS AT THE FOLLOWING POINTS: A. AT THE REQUIRED PRE-CONSTRUCTION MEETING.
- B. FOLLOWING INSTALLATION OF SEDIMENT CONTROL MEASURES AND PRIOR TO ANY OTHER LAND DISTURBING ACTIVITY C. DURING THE INSTALLATION OF A SEDIMENT BASIN OR STORMWATER MANAGEMENT STRUCTURE AT THE REQUIRED INSPECTION POINTS (SEE INSPECTION CHECKLIST ON PLAN). NOTIFICATION PRIOR TO COMMENCING CONSTRUCTION IS MANDATORY.
- PRIOR TO REMOVAL OR MODIFICATION OF ANY SEDIMENT CONTROL STRUCTURE(S). . PRIOR TO FINAL ACCEPTANCE.
- 3. THE PERMITTEE SHALL CONSTRUCT ALL EROSION AND SEDIMENT CONTROL MEASURES PER THE APPROVED PLAN AND CONSTRUCTION SEQUENCE, SHALL HAVE THEM INSPECTED AND APPROVED BY THE DEPARTMENT PRIOR TO BEGINNING ANY OTHER LAND DISTURBANCES. SHALL ENSURE THAT ALL RUNOFF FROM DISTURBED AREAS IS DIRECTED TO THE SEDIMENT CONTROL DEVICES, AND SHALL NOT REMOVE ANY EROSION OR SEDIMENT CONTROL MEASURE WITHOUT PRIOR PERMISSION FROM THE DEPARTMENT.
- 4. THE PERMITTEE SHALL PROTECT ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS TO PREVENT THE DEPOSITION OF MATERIALS ONTO TRAVERSED PUBLIC THOROUGHFARE(S). ALL MATERIALS DEPOSITED ONTO PUBLIC THOROUGHFARE(S) SHALL BE REMOVED IMMEDIATELY.
- 5. THE PERMITTEE SHALL INSPECT PERIODICALLY AND MAINTAIN CONTINUOUSLY IN EFFECTIVE OPERATING CONDITION, ALL EROSION AND SEDIMENT CONTROL MEASURES UNTIL SUCH TIME AS THEY ARE REMOVED WITH PRIOR PERMISSION FROM THE DEPARTMENT. THE PERMITTEE IS RESPONSIBLE FOR IMMEDIATELY REPAIRING OR REPLACING ANY SEDIMENT CONTROL MEASURES WHICH HAVE BEEN DAMAGED OR REMOVED BY THE PERMITTEE OR ANY OTHER PERSON.
- 6. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY
- STABILIZATION MUST BE COMPLETED WITHIN: A) THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES. SWALES. DITCHES.
- PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND B) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING. ALL AREAS DISTURBED OUTSIDE OF THE PERIMETER SEDIMENT CONTROL SYSTEM MUST BE MINIMIZED AND STABILIZED IMMEDIATELY. MAINTENANCE MUST BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION.
- 7. THE PERMITTEE SHALL APPLY SOD, SEED, AND ANCHORED STRAW MULCH, OR OTHER APPROVED STABILIZATION MEASURES TO ALL DISTURBED AREAS WITHIN SEVEN (7) CALENDAR DAYS AFTER STRIPPING AND GRADING ACTIVITIES HAVE CEASED ON THAT AREA. MÁINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION. ACTIVE CONSTRUCTION AREAS SUCH AS BORROW OR STOCKPILE AREAS, ROADWAY IMPROVEMENTS, AND AREAS WITHIN FIFTY (50) FEET OF A BUILDING UNDER CONSTRUCTION MAY BE EXEMPT FROM THIS REQUIREMENT, PROVIDED THAT EROSION AND SEDIMENT CONTROL MEASURES ARE INSTALLED AND MAINTAINED TO PROTECT THOSE AREAS.
- 3. PRIOR TO REMOVAL OF SEDIMENT CONTROL MEASURES, THE PERMITTEE SHALL STABILIZE AL CONTRIBUTORY DISTURBED AREAS WITH REQUIRED SOIL AMENDMENTS AND TOPSOIL, USING SOD OR AN APPROVED PERMANENT SEED MIXTURE AND AN APPROVED ANCHORED MULCH. WOOD FIBER MULCH MAY ONLY BE USED IN SEEDING SEASON WHEN THE SLOPE DOES NOT EXCEED 10% AND GRADING HAS BEEN DONE TO PROMOTE SHEET FLOW DRAINAGE. AREAS BROUGHT TO FINISHED GRADE DURING THE SEEDING SEASON SHALL BE PERMANENTLY STABILIZED WITHIN SEVEN (7) CALENDAR DAYS OF ESTABLISHMENT. WHEN PROPERTY IS BROUGHT TO FINISHED GRADE DÙRING THE MONTHS OF NOVEMBER THROUGH FEBRUARY. AND PERMANENT STABILIZATION IS FOUND TO BE IMPRACTICAL, AN APPROVED TEMPORARY SEED AND STRAW ANCHORED MULCH SHALL BE APPLIED TO DISTURBED AREAS. THE FINAL PERMANENT STABILIZATION OF SUCH PROPERTY SHALL BE COMPLETED PRIOR TO THE FOLLOWING APRIL 15.
- THE SITE PERMIT, WORK, MATERIALS, APPROVED SC/SM PLANS, AND TEST REPORTS SHALL BE AVAILABLE AT THE SITE FOR INSPECTION BY DULY AUTHORIZED OFFICIALS OF MONTGOMERY
- 10. SURFACE DRAINAGE FLOWS OVER UNSTABILIZED CUT AND FILL SLOPES SHALL BE CONTROLLED BY EITHER PREVENTING DRAINAGE FLOWS FROM TRAVERSING THE SLOPES OR BY INSTALLING MECHANICAL DEVICES TO LOWER THE WATER DOWN SLOPE WITHOUT CAUSING EROSION. DIKES SHALL BE INSTALLED AND MAINTAINED AT THE TOP OF CUT OR FILL SLOPES UNTIL THE SLOPE AND DRAINAGE AREA TO IT ARE FULLY STABILIZED, AT WHICH TIME THEY MUST BE REMOVED AND FINAL GRADING DONE TO PROMOTE SHEET FLOW DRAINAGE. MECHANICAL DEVICES MUST BE PROVIDED AT POINTS OF CONCENTRATED FLOW WHERE EROSION IS LIKELY TO OCCUR.
- 11. PERMANENT SWALES OR OTHER POINTS OF CONCENTRATED WATER FLOW SHALL BE STABILIZED WITHIN 3 CALENDAR DAYS OF ESTABLISHMENT WITH SOD OR SEED WITH AN APPROVED EROSION CONTROL MATTING OR BY OTHER APPROVED STABILIZATION MEASURES.
- 12. SEDIMENT CONTROL DEVICES SHALL BE REMOVED, WITH PERMISSION OF THE DEPARTMENT, WITHIN THIRTY (30) CALENDAR DAYS FOLLOWING ESTABLISHMENT OF PERMANENT STABILIZATION IN ALL FOR SEDIMENT CONTROL SHALL BE CONVERTED TO THE PERMANENT CONFIGURATION WITHIN THIS
- 13. NO PERMANENT CUT OR FILL SLOPE WITH A GRADIENT STEEPER THAN 3:1 WILL BE PERMITTED IN LAWN MAINTENANCE AREAS OR ON RESIDENTIAL LOTS. A SLOPE GRADIENT OF UP TO 2:1 WILL BE PERMITTED IN NONMAINTENANCE AREAS PROVIDED THAT THOSE AREAS ARE INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN WITH A LOW-MAINTENANCE GROUND COVER SPECIFIED FOR PERMANENT STABILIZATION. SLOPE GRADIENT STEEPER THAN 2:1 WILL NOT BE PERMITTED WITH VEGETATIVE STABILIZATION
- 14. THE PERMITTEE SHALL INSTALL A SPLASHBLOCK AT THE BOTTOM OF EACH DOWNSPOUT UNLESS THE DOWNSPOUT IS CONNECTED BY A DRAIN LINE TO AN ACCEPTABLE OUTLET.
- 15. FOR FINISHED GRADING, THE PERMITTEE SHALL PROVIDE ADEQUATE GRADIENTS SO AS TO PREVENT WATER FROM STANDING ON THE SURFACE OF LAWNS MORE THAN TWENTY-FOUR (24) HOURS AFTER THE END OF A RAINFALL, EXCEPT IN DESIGNATED DRAINAGE COURSES AND SWALE FLOW AREAS, WHICH MAY DRAIN AS LONG AS FORTY-EIGHT (48) HOURS AFTER THE END OF A
- 16. SEDIMENT TRAPS OR BASINS ARE NOT PERMITTED WITHIN 20 FEET OF A BUILDING WHICH IS EXISTING OR UNDER CONSTRUCTION. NO BUILDING MAY BE CONSTRUCTED WITHIN 20 FEET OF A
- 17. ALL INLETS IN NON-SUMP AREAS SHALL HAVE ASPHALT BERMS INSTALLED AT THE TIME OF BASE PAVING ESTABLISHMENT.
- 18. THE SEDIMENT CONTROL INSPECTOR HAS THE OPTION OF REQUIRING ADDITIONAL SEDIMENT
- CONTROL MEASURES, AS DEEMED NECESSARY. 19. ALL TRAP ELEVATIONS ARE RELATIVE TO THE OUTLET ELEVATION, WHICH MUST BE ON EXISTING
- UNDISTURBED GROUND.
- 20. VEGETATIVE STABILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 21. SEDIMENT TRAP(S)/BASIN(S) SHALL BE CLEANED OUT AND RESTORED TO THE ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO THE POINT OF ONE-HALF (1/2) THE WET STORAGE DEPTH OF THE TRAP/BASIN (1/4 THE WET STORAGE DEPTH FOR ST-III) OR WHEN REQUIRED BY THE SEDIMENT CONTROL INSPECTOR.
- 22. SEDIMENT REMOVED FROM TRAPS/BASINS SHALL BE PLACED AND STABILIZED IN APPROVED AREAS, BUT NOT WITHIN A FLOODPLAIN.

111 MARYLAND AVE.

DEPARTMENT OF PUBLIC WORKS

ROCKVILLE, MARYLAND





Rockville

- 23. ALL SEDIMENT BASINS AND TRAPS MUST BE SURROUNDED WITH A WELDED WIRE SAFETY FENCE. THE FENCE MUST BE AT LEAST 42 INCHES HIGH, HAVE POSTS SPACED NO FARTHER APART THAN 8 FEET, HAVE MESH OPENINGS NO GREATER THE TWO INCHES IN WIDTH AND FOUR INCHES IN HEIGHT, WITH A MINIMUM OF 14 GAUGE WIRE. SAFETY FENCE MUST BE MAINTAINED IN GOOD CONDITION AT ALL TIMES.
- 24. NO EXCAVATION IN THE AREAS OF EXISTING UTILITIES IS PERMITTED UNLESS THEIR LOCATION HAS BEEN DETERMINED. CALL "MISS UTILITY" AT 1-800-257-7777, 48 HOURS PRIOR TO THE START
- 25. OFF-SITE SPOIL OR BORROW AREAS MUST HAVE PRIOR APPROVAL BY DPS.
- 26. SEDIMENT TRAP/BASIN DEWATERING FOR CLEANOUT OR REPAIR MAY ONLY BE DONE WITH THE DPS INSPECTOR'S PERMISSION. THE INSPECTOR MUST APPROVE THE DEWATERING METHOD FOR EACH APPLICATION. THE FOLLOWING METHODS MAY BE CONSIDERED: A. PUMP DISCHARGE MAY BE DIRECTED TO ANOTHER ON-SITE SEDIMENT TRAP OR BASIN, PROVIDED
- IT IS OF SUFFICIENT VOLUME AND THE PUMP INTAKE IS FLOATED TO PREVENT AGITATION OR SUCTION OF DEPOSITED SEDIMENTS: OR B. THE PUMP INTAKE MAY UTILIZE A REMOVABLE PUMPING STATION AND MUST DISCHARGE INTO AN
- UNDISTURBED AREA THROUGH A NON-EROSIVE OUTLET; OR C. THE PUMP INTAKE MAY BE FLOATED AND DISCHARGE INTO A DIRT BAG (12 OZ. NON-WOVEN FABRIC), OR APPROVED EQUIVALENT, LOCATED IN AN UNDISTURBED BUFFER AREA.
- REMEMBER: DEWATERING OPERATION AND METHOD MUST HAVE PRIOR APPROVAL BY THE DPS INSPECTOR.
- 27. THE PERMITTEE MUST NOTIFY THE DEPARTMENT OF ALL UTILITY CONSTRUCTION ACTIVITIES WITHIN THE PERMITTED LIMITS OF DISTURBANCE PRIOR TO THE COMMENCEMENT OF THOSE ACTIVITIES.
- 28. TOPSOIL MUST BE APPLIED TO ALL PERVIOUS AREAS WITHIN THE LIMITS OF DISTURBANCE PRIOR TO PERMANENT STABILIZATION IN ACCORDANCE WITH MDE "STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS".

SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

A. SOIL PREPARATION

1. TEMPORARY STABILIZATION

- A. SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, I MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
- B. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
- C. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

2. PERMANENT STABILIZATION

- A. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:
 - I. SOIL PH BETWEEN 6.0 AND 7.0.
 - II. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).
 - III. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
 - IV. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT. V. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT
- B. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.
- C. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.
- D. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.
- E. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRIABLE. SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

B. TOPSOILING

- 1. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH, SOILS OF CONCERN HAVE LOW MOISTURE CONTENT. LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.
- 2. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY
- 3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE: A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT

ADEQUATE TO PRODUCE VEGETATIVE GROWTH.

- B. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
- C. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO
- D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT
- . AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION
- 5. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE
- A. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5

PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS,

GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 11/2

- INCHES IN DIAMETER. B. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
- C. TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL
- 6. TOPSOIL APPLICATION
 - A. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL
- B. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED

- WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
- . TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.
- C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)
- 1. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES.
- 2. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND WARRANTY OF THE PRODUCER.
- 3. LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.
- 4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE
- 5. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF

SEEDING AND MULCHING

A. SEEDING

1. SPECIFICATIONS

- A. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.
- B. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAWS.
- C. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS
- D. SOD OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.
- 2. APPLICATION A. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST
 - I. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1, PERMANENT SEEDING TABLE B.3, OR SITE-SPECIFIC SEEDING SUMMARIES.
 - II. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDED AREA WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.
 - B. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER
 - I. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEEDBED MUST BE FIRM II. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF
 - THE SEEDING RATE IN EACH DIRECTION. C. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES
 - I. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN; P205 (PHOSPHOROUS), 200 POUNDS PER ACRE; K20 (POTASSIUM), 200 POUNDS PER ACRE.
 - II. LIME: USE ONLY GROUND AGRICULTURAL LIMESTONE (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING). NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.
 - III. MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION.
 - IV. WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.

B. MULCHING

1. MULCH MATERIALS (IN ORDER OF PREFERENCE)

SEED AND FERTILIZER).

- A. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.
- B. WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.
- I. WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY.
- II. WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.
- III. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL MUST FORM A BLOTTER-LIKE GROUND COVER, ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS
- IV. WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.
- V. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MINIMUM.

2. APPLICATION

- A. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.
- B. WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM LOOSE DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. WHEN USING A MULCH ANCHORING TOOL, INCREASE THE APPLICATION RATE TO 2.5 TONS PER ACRE.
- C. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 1500 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.

- A. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND EROSION HAZARD:
- I. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR.
- II. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER AT A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
- III. SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-70, PETROSET, TERRA TAX II, TERRA TACK AR OR OTHER APPROVED EQUAL MAY BE USED. FOLLOW APPLICATION RATES AS SPECIFIED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.
- IV. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000 FEET LONG.

PERMANENT STABILIZATION

A. SEED MIXTURES

1. GENERAL USE

THE PLAN.

- A. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON
- B. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL AREA PLANTING.
- C. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY.
- D. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3 ½ POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY

2. TURFGRASS MIXTURES

- A. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
- B. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S). APPLICATION RATES. AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
 - I. KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
 - II. KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. CERTIFIED PERENNIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2 POUNDS MIXTURÉ PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
 - III. TALL FESCUE/KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN DROUGHT PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEMENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES; CERTIFIED TALL FESCUE CULTIVARS 95 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0 TO 5 PERCENT. SEEDING RATE: 5 TO 8 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLENDED.
- IV. KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE: FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES: CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATE: 1½ TO 3 POUNDS PER 1000 SQUARE FEET.
- NOTES: SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR
- CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE
- C. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES ARE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: 6B)
- D. TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES, LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE STONES AND DEBRIS OVER 11/2 INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.
- E. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (1/2 TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE SITES.

PROFESSIONAL CERTIFICATION: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer under the laws of the State of Maryland, License No. <u>31168</u>, Expiration Date: <u>1/12/2025</u>

JASON AZAR

NAME

B. SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER). 1. GENERAL SPECIFICATIONS

- A. CLASS OF TURFGRASS SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE MADE
 - AVAILABLE TO THE JOB FOREMAN AND INSPECTOR. B. SOD MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF %INCH, PLUS OR MINUS 1/4 INCH,
 - AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GROWTH AND THATCH. BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE. C. STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT
- AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.
- D. SOD MUST NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.
- E. SOD MUST BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPLANTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.

2. SOD INSTALLATION

- A. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOD.
- B. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND TIGHTLY WEDGED AGAINST EACH OTHER. STAGGER LATERAL JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE AIR
- C. WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERING JOINTS. ROLL AND TAMP, PEG OR OTHERWISE SECURE THE SOD TO PREVENT SLIPPAGE ON SLOPES. ENSURE SOLID CONTACT EXISTS BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE.
- D. WATER THE SOD IMMEDIATELY FOLLOWING ROLLING AND TAMPING UNTIL THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. COMPLETE THE

OPERATIONS OF LAYING, TAMPING AND IRRIGATING FOR ANY PIECE OF SOD WITHIN EIGHT HOURS. 3. SOD MAINTENANCE

- A. IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH
- B. AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT
- C. DO NOT MOW UNTIL THE SOD IS FIRMLY ROOTED. NO MORE THAN 1/2 OF THE GRASS LEAF MUST BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. MAINTAIN A GRASS HEIGHT OF AT LEAST 3 INCHES UNLESS OTHERWISE SPECIFIED.

INCREMENTAL STABILIZATION

STABILIZATION.

- A. INCREMENTAL STABILIZATION CUT SLOPES
- 1. EXCAVATE AND STABILIZE CUT SLOPES IN INCREMENTS NOT TO EXCEED 15 FEET IN HEIGHT. PREPARE SEEDBED AND APPLY SEED AND MULCH ON ALL CUT SLOPES AS THE WORK PROGRESSES.

OF 4 INCHES. WATER SOD DURING THE HEAT OF THE DAY TO PREVENT WILTING.

- 2. FOR CONSTRUCTION SEQUENCE REFER TO SHEET C-330.
- NOTE: ONCE EXCAVATION HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING
- SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION. B. INCREMENTAL STABILIZATION - FILL SLOPES

ALL SLOPES AS THE WORK PROGRESSES.

- 1. CONSTRUCT AND STABILIZE FILL SLOPES IN INCREMENTS NOT TO EXCEED 15 FEET IN HEIGHT. PREPARE SEEDBED AND APPLY SEED AND MULCH ON
- 2. STABILIZE SLOPES IMMEDIATELY WHEN THE VERTICAL HEIGHT OF A LIFT REACHES 15 FEET, OR WHEN THE GRADING OPERATION CEASES AS PRESCRIBED IN THE PLANS.
- 3. AT THE END OF EACH DAY, INSTALL TEMPORARY WATER CONVEYANCE PRACTICE(S). AS NECESSARY, TO INTERCEPT SURFACE RUNOFF AND CONVEY
- IT DOWN THE SLOPE IN A NON-EROSIVE MANNER. 4. FOR CONSTRUCTION SEQUENCE REFER TO SHEET C-330.
- NOTE: ONCE THE PLACEMENT OF FILL HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY

TEMPORARY SEEDING TABLE B.1

	TEMPORARY SEEDING TABLE D.I								
SEED MIXTURE (HARDINESS ZONE 6b) (FROM TABLE B.1)				FERTILIZER RATE	LIME RATE				
NO.	SPECIES	APPLICATION RATE (lb/ac)	SEEDING DATES	SEEDING DEPTHS	(10–10–10)				
	BARLEY	96	3/1-5/15 8/1-10/15	1"					
	CEREAL RYE	112	3/1-5/15 8/1-11/15	1"	436 lb/ac	2 tons/ac			
	WHEAT	120	3/1-5/15 8/1-10/15	1"	(10 lb/1000 sf)	(90 lb/1000 sf)			
	FOXTAIL MILLET	30	5/16-7/31	1/2"					

APPLIES TO EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR

LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

PERMANENT SEEDING TABLE B.3

SEED MIXTURE (HARDINESS ZONE 6b) FERTILIZER RATE (10-20-20)							LIME	
MIX NO.	SPECIES	APPLICATION RATE (lb/ac)	SEEDING DATES	N	P 2 0 5	K20	LIME RATE	
	TALL FESCUE(50%)	60						
9	PERENNIAL RYEGRASS(15%)	20	3/1-5/15 8/1-10/15	45 lb/ac (1.0 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)	
	KENTUCKY BLUEGRASS(35%)	40						

APPLIES TO EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

ALL DISTURBED AREAS TO REMAIN GRASS SHALL BE PERMANENTLY STABILIZED WITH SOD DESCRIPTION OF REVISION P.E. INITIAL DATE DPW

DATE SUBMITTED: POTOMAC VALLEY ROAD SIDEWALK EXTENSION

DESIGN PLAN APPROVAL AS BUILT PLAN APPROVAL PWK# <u>2023-00014</u> REVIEWED BY CHIEF, CONSTRUCTION MANAGEMENT APPROVAL DATE DIRECTOR OF PUBLIC WORKS APPROVAL DATE

EROSION & SEDIMENT CONTROL PLAN

Election District No. (4 OR 9) City of Rockville, Maryland

SHEET AUGUST 2023 NO. ____ 1"=20'

APPROVAL OF REVISIONS AFTER INTIAL PLAN APPROVAL